

## EAST Search History

| Ref # | Hits | Search Query                               | DBs   | Default Operator | Plurals | Time Stamp       |
|-------|------|--|---|------------------|---------|------------------|
| L1    | 93   | (540/462,549/270,560/51,568/449).<br>CCLS. | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR               | OFF     | 2007/08/13 12:31 |
| L2    | 19   | L1 AND EPOTHILONE                          | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR               | OFF     | 2007/08/13 12:31 |

cl 11

Connecting via Winsock to STN

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\* \* \* \* \* Welcome to STN International \* \* \* \* \*

|      |    |        |   |
|------|----|--------|---|
| NEWS | 1  |        | Web Page for STN Seminar Schedule - N. America                      |
| NEWS | 2  | MAY 01 | New CAS web site launched   |
| NEWS | 3  | MAY 08 | CA/CAPplus Indian patent publication number format defined          |
| NEWS | 4  | MAY 14 | RDISCLOSURE on STN Easy enhanced with new search and display fields |
| NEWS | 5  | MAY 21 | BIOSIS reloaded and enhanced with archival data                     |
| NEWS | 6  | MAY 21 | TOXCENTER enhanced with BIOSIS reload                               |
| NEWS | 7  | MAY 21 | CA/CAPplus enhanced with additional kind codes for German patents   |
| NEWS | 8  | MAY 22 | CA/CAPplus enhanced with IPC reclassification in Japanese patents   |
| NEWS | 9  | JUN 27 | CA/CAPplus enhanced with pre-1967 CAS Registry Numbers              |
| NEWS | 10 | JUN 29 | STN Viewer now available  |
| NEWS | 11 | JUN 29 | STN Express, Version 8.2, now available                             |
| NEWS | 12 | JUL 02 | LEMBASE coverage updated  |
| NEWS | 13 | JUL 02 | LMEDLINE coverage updated   |
| NEWS | 14 | JUL 02 | SCISEARCH enhanced with complete author names                       |
| NEWS | 15 | JUL 02 | CHEMCATS accession numbers revised                                  |
| NEWS | 16 | JUL 02 | CA/CAPplus enhanced with utility model patents from China           |
| NEWS | 17 | JUL 16 | CAPplus enhanced with French and German abstracts                   |
| NEWS | 18 | JUL 18 | CA/CAPplus patent coverage enhanced                                 |
| NEWS | 19 | JUL 26 | USPATFULL/USPAT2 enhanced with IPC reclassification                 |
| NEWS | 20 | JUL 30 | USGENE now available on STN   |
| NEWS | 21 | AUG 06 | CAS REGISTRY enhanced with new experimental property tags           |
| NEWS | 22 | AUG 06 | BEILSTEIN updated with new compounds                                |
| NEWS | 23 | AUG 06 | FSTA enhanced with new thesaurus edition                            |
| NEWS | 24 | AUG 13 | CA/CAPplus enhanced with additional kind codes for granted patents  |

NEWS EXPRESS 29 JUNE 2007: CURRENT WINDOWS VERSION IS V8.2,  
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 05 JULY 2007.

|            |   |
|------------|---|
| NEWS HOURS | STN Operating Hours Plus Help Desk Availability               |
| NEWS LOGIN | Welcome Banner and News Items                                 |
| NEWS IPC8  | For general information regarding STN implementation of IPC 8 |

Enter NEWS followed by the item number or name to see news on that specific topic.

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FILE 'HOME' ENTERED AT 10:19:07 ON 13 AUG 2007

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 10:19:20 ON 13 AUG 2007

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STRUCTURE FILE UPDATES: 12 AUG 2007 HIGHEST RN 944447-30-7

DICTIONARY FILE UPDATES: 12 AUG 2007 HIGHEST RN 944447-30-7

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

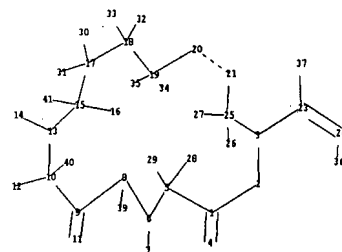
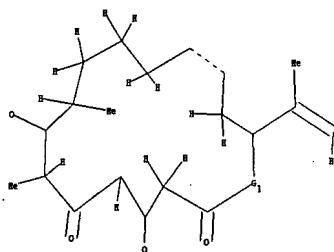
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10538200a.str



chain nodes :

4 7 11 12 14 16 23 24 26 27 28 29 30 31 32 33 34 35 36 37 39  
40 41

ring nodes :

1 2 3 5 6 8 9 10 13 15 17 18 19 20 21 25

chain bonds :

1-4 3-23 5-28 5-29 6-7 8-39 9-11 10-12 10-40 13-14 15-16 15-41 17-30  
17-31 18-32 18-33 19-34 19-35 23-24 23-37 24-36 25-26 25-27

ring bonds :

1-2 1-5 2-3 3-25 5-6 6-8 8-9 9-10 10-13 13-15 15-17 17-18 18-19 19-20  
20-21 21-25

exact/norm bonds :

1-2 1-4 1-5 2-3 3-23 3-25 5-6 5-28 5-29 6-7 6-8 8-9 8-39 9-10 9-11  
10-12 10-13 10-40 13-14 13-15 15-16 15-17 15-41 17-18 17-30 17-31 18-19  
18-32 18-33 19-20 19-34 19-35 20-21 21-25 23-24 23-37 24-36 25-26 25-27

isolated ring systems :

containing 1 :

G1:O,N

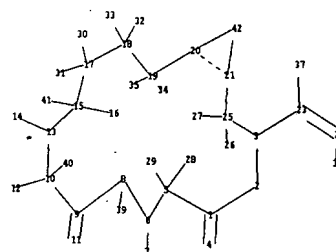
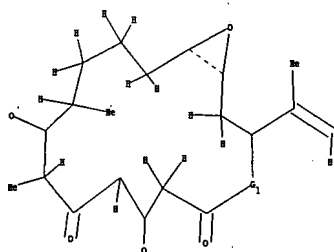
Match level :

1:Atom 2:Atom 3:Atom 4:CLASS 5:Atom 6:Atom 7:CLASS 8:Atom 9:Atom 10:Atom  
11:CLASS 12:CLASS 13:Atom 14:CLASS 15:Atom 16:CLASS 17:Atom 18:Atom 19:Atom  
20:Atom 21:Atom 23:CLASS 24:CLASS 25:Atom 26:CLASS 27:CLASS 28:CLASS  
29:CLASS 30:CLASS 31:CLASS 32:CLASS 33:CLASS 34:CLASS 35:CLASS 36:CLASS  
37:CLASS 39:CLASS 40:CLASS 41:CLASS

L1 STRUCTURE UPLOADED

=>

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chain nodes :

4 7 11 12 14 16 23 24 26 27 28 29 30 31 32 33 34 35 36 37 39  
40 41

ring nodes :

1 2 3 5 6 8 9 10 13 15 17 18 19 20 21 25 42

chain bonds :

1-4 3-23 5-28 5-29 6-7 8-39 9-11 10-12 10-40 13-14 15-16 15-41 17-30  
17-31 18-32 18-33 19-34 19-35 23-24 23-37 24-36 25-26 25-27

ring bonds :  
 1-2 1-5 2-3 3-25 5-6 6-8 8-9 9-10 10-13 13-15 15-17 17-18 18-19 19-20  
 20-21 20-42 21-25 21-42  
 exact/norm bonds :  
 1-2 1-4 1-5 2-3 3-23 3-25 5-6 5-28 5-29 6-7 6-8 8-9 8-39 9-10 9-11  
 10-12 10-13 10-40 13-14 13-15 15-16 15-17 15-41 17-18 17-30 17-31 18-19  
 18-32 18-33 19-20 19-34 19-35 20-21 20-42 21-25 21-42 23-24 23-37 24-36  
 25-26 25-27  
 isolated ring systems :  
 containing 1 :

G1:O,N

Match level :

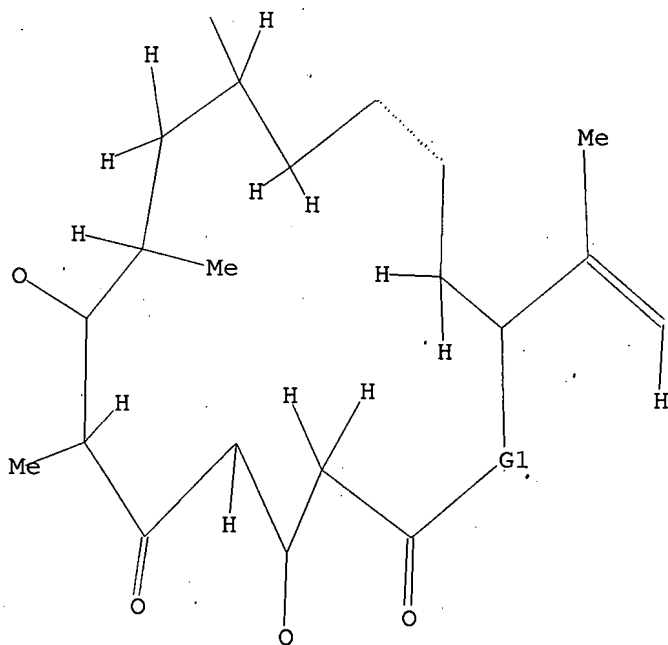
1:Atom 2:Atom 3:Atom 4:CLASS 5:Atom 6:Atom 7:CLASS 8:Atom 9:Atom 10:Atom  
 11:CLASS 12:CLASS 13:Atom 14:CLASS 15:Atom 16:CLASS 17:Atom 18:Atom 19:Atom  
 20:Atom 21:Atom 23:CLASS 24:CLASS 25:Atom 26:CLASS 27:CLASS 28:CLASS  
 29:CLASS 30:CLASS 31:CLASS 32:CLASS 33:CLASS 34:CLASS 35:CLASS 36:CLASS  
 37:CLASS 39:CLASS 40:CLASS 41:CLASS 42:Atom

L2 STRUCTURE UPLOADED

=> d 11

L1 HAS NO ANSWERS

L1 STR



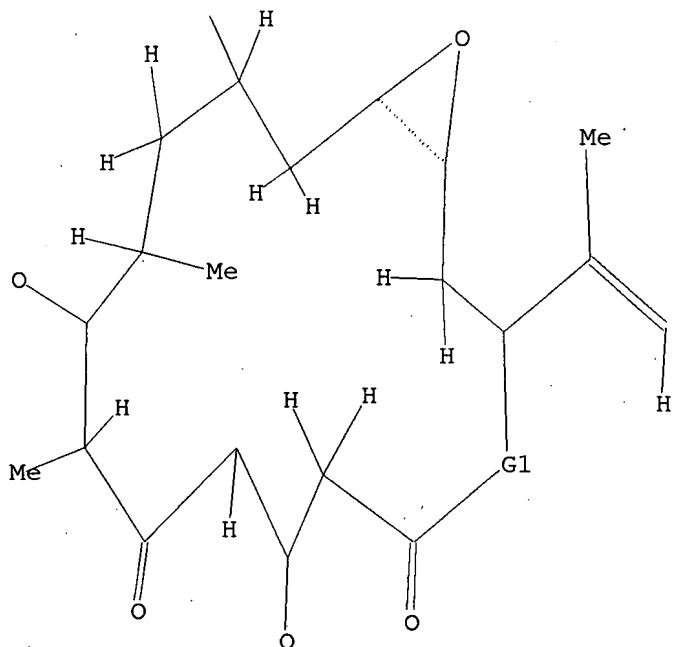
G1 O,N

Structure attributes must be viewed using STN Express query preparation.

=> d 12

L2 HAS NO ANSWERS

L2 STR



G1 O,N

Structure attributes must be viewed using STN Express query preparation.

=> s l1 full

FULL SEARCH INITIATED 10:20:46 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 56309 TO ITERATE

100.0% PROCESSED 56309 ITERATIONS

14 ANSWERS

SEARCH TIME: 00.00.01

L3 14 SEA SSS FUL L1

=> s l2 full

FULL SEARCH INITIATED 10:20:52 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 1862 TO ITERATE

100.0% PROCESSED 1862 ITERATIONS

9 ANSWERS

SEARCH TIME: 00.00.01

L4 9 SEA SSS FUL L2

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE  
ENTRY

TOTAL  
SESSION

FULL ESTIMATED COST

344.65

344.86

FILE 'CAPLUS' ENTERED AT 10:20:57 ON 13 AUG 2007

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FILE LAST UPDATED: 12 Aug 2007 (20070812/ED)

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=> s l3 full  
L5 3 L3

=> d ibib abs hitstr tot

L5 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2005:460208 CAPLUS  
DOCUMENT NUMBER: 143:171398  
TITLE: Production of epothilones derivatives in Myxococcus or Sorangium comprising PKS mutant gene  
INVENTOR(S): Qiu, Rongguo  
PATENT ASSIGNEE(S): Beijing Huahao Zhongtian Biotechnology Co., Ltd.,  
Peop. Rep. China  
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, No pp.  
given  
CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE     |
|------------------------|------|----------|-----------------|----------|
| CN 1521258             | A    | 20040818 | CN 2003-103031  | 20030128 |
| PRIORITY APPLN. INFO.: |      |          | CN 2003-103031  | 20030128 |

OTHER SOURCE(S): CASREACT 143:171398; MARPAT 143:171398

AB Described is a method for production of epothilones derivs. in Myxococcus or Sorangium comprising PKS mutant gene. The invention also relates to the uses of these compds. in preparing medicine composition for treating tumor, inhibiting cell proliferation and growth.

IT 252917-35-4P 252917-37-6P 860300-23-8P

RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(production of epothilones derivs. in Myxococcus or Sorangium comprising PKS mutant gene)

RN 252917-35-4 CAPLUS

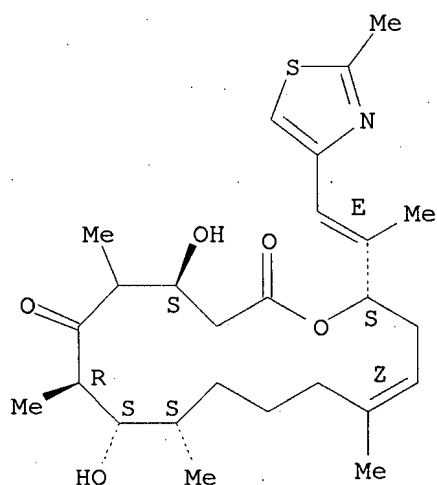
CN Oxacyclohexadec-13-ene-2,6-dione, 4,8-dihydroxy-5,7,9,13-tetramethyl-16-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (4S,7R,8S,9S,13Z,16S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

Double bond geometry as shown.

Currently available stereo shown.





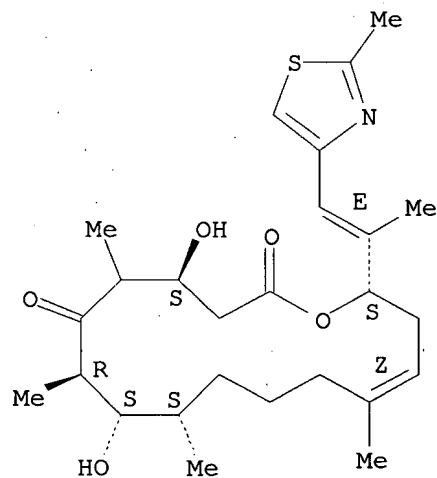
RN 252917-37-6 CAPLUS

CN Oxacyclohexadec-13-ene-2,6-dione, 4,8-dihydroxy-5,7,9,13-tetramethyl-16-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (4S,7R,8S,9S,13Z,16S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

Double bond geometry as shown.

Currently available stereo shown.

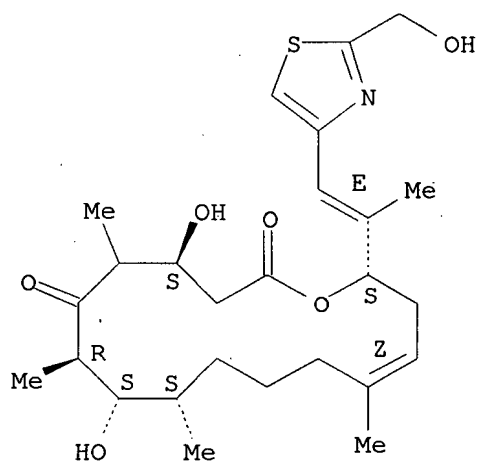


RN 860300-23-8 CAPLUS

CN Oxacyclohexadec-13-ene-2,6-dione, 4,8-dihydroxy-16-[(1E)-2-[2-(hydroxymethyl)-4-thiazolyl]-1-methylethenyl]-5,7,9,13-tetramethyl-, (4S,7R,8S,9S,13Z,16S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



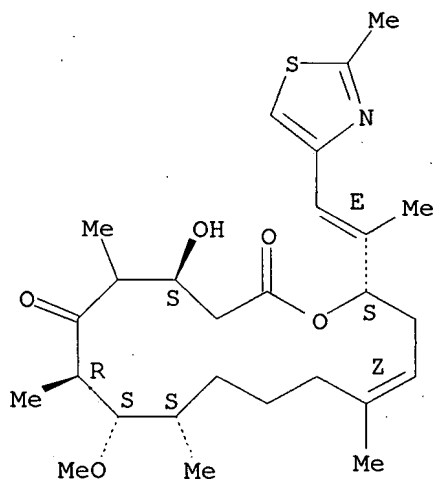
IT 860300-09-0P 860300-14-7P 860300-16-9P  
860300-17-0P 860300-18-1P 860300-20-5P  
860300-26-1P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(production of epothilones derivs. in Myxococcus or Sorangium comprising PKS mutant gene)

RN 860300-09-0 CAPLUS

CN Oxacyclohexadec-13-ene-2,6-dione, 4-hydroxy-8-methoxy-5,7,9,13-tetramethyl-16-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (4S,7R,8S,9S,13Z,16S)-(9CI) (CA INDEX NAME)

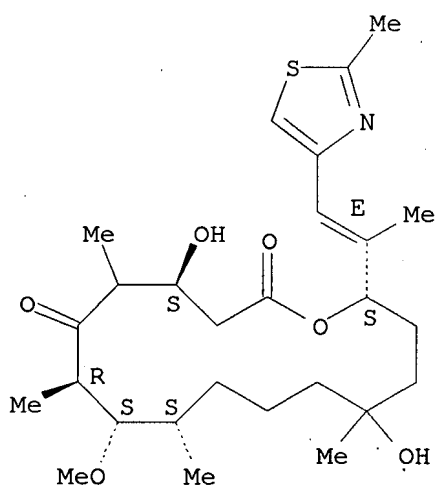
Absolute stereochemistry.  
Double bond geometry as shown.



RN 860300-14-7 CAPLUS

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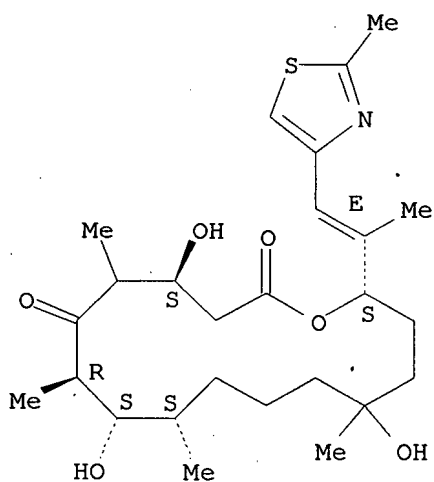
Absolute stereochemistry.  
Double bond geometry as shown.



RN 860300-16-9 CAPLUS

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(CA INDEX NAME)

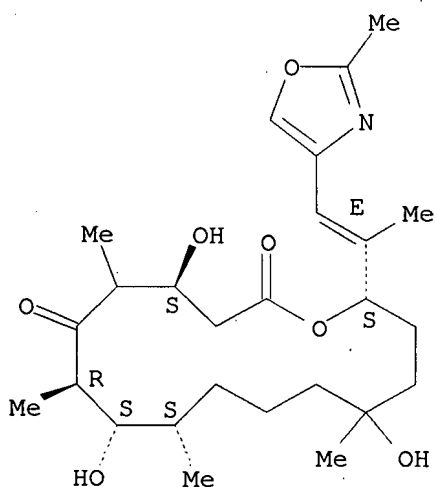
Absolute stereochemistry.  
Double bond geometry as shown.



RN 860300-17-0 CAPLUS

CN Oxacyclohexadecane-2,6-dione, 4,8,13-trihydroxy-5,7,9,13-tetramethyl-16-[(1E)-1-methyl-2-(2-methyl-4-oxazolyl)ethenyl]-, (4S,7R,8S,9S,16S)- (9CI)  
(CA INDEX NAME)

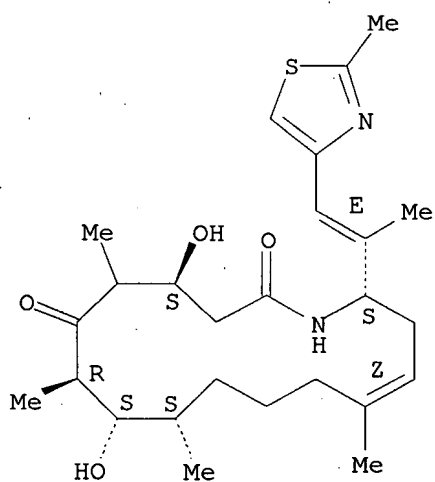
Absolute stereochemistry.  
Double bond geometry as shown.



RN 860300-18-1 CAPLUS

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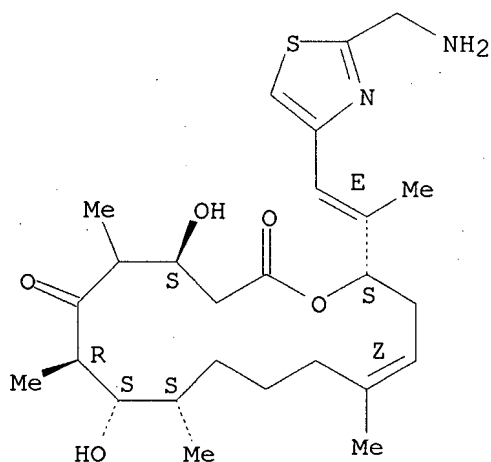
Absolute stereochemistry.  
Double bond geometry as shown.



RN 860300-20-5 CAPLUS

CN Oxacyclohexadec-13-ene-2,6-dione, 16-[(1E)-2-[2-(aminomethyl)-4-thiazolyl]-1-methylethenyl]-4,8-dihydroxy-5,7,9,13-tetramethyl-, (4S,7R,8S,9S,13Z,16S)-(9CI) (CA INDEX NAME)

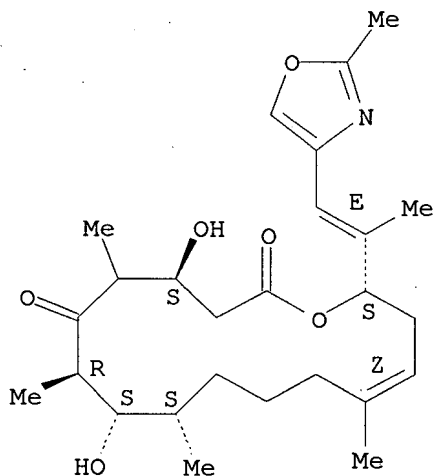
Absolute stereochemistry.  
Double bond geometry as shown.



RN 860300-26-1 CAPLUS

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Absolute stereochemistry.  
Double bond geometry as shown.



L5 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:413810 CAPLUS

DOCUMENT NUMBER: 135:179755

TITLE: New Natural Epothilones from Sorangium cellulosum, Strains So ce90/B2 and So ce90/D13: Isolation, Structure Elucidation, and SAR Studies

AUTHOR(S): Hardt, Ingo H.; Steinmetz, Heinrich; Gerth, Klaus; Sasse, F.; Reichenbach, Hans; Hoefle, Gerhard  
CORPORATE SOURCE: Gesellschaft fuer Biotechnologische Forschung mbH, Braunschweig, D-38124, Germany

SOURCE: Journal of Natural Products (2001), 64(7), 847-856  
CODEN: JNPRDF; ISSN: 0163-3864

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In addition to epothilones A (1) and B (2), 37 natural epothilone variants

and epothilone-related compds. were isolated from the culture broth of a 700 L fermentation of *Sorangium cellulosum*, strain So ce90/B2. Of these, only the 12,13-desoxyepothilones, epothilone C (14) and D (15), were produced in significant amts. (3-6 mg/L); the 21-hydroxy derivs. and epothilones E (3) and F (4), in low and variable amts. due to further degradation by the producing organism. Most of the other epothilone variants were produced only in 1-100 µg/L amts. The new compds. are very similar in structure to the parent compds. 1, 2 and 14, 15 and are presumably the result of the imperfect selectivity of the biosynthetic enzymes for acetate and propionate. Further, epothilones containing an oxazole moiety (10-13) in the side chain instead of a thiazole as well as ring-expanded 18-membered macrolides, epothilones I (30-35), and a ring contracted 14-membered macrolide, epothilone K (36), were found as very minor metabolites. The mutant strain, So ce90/D13, instead of macrolactones, produced short-chain carboxylic acids 40, 41, and 42 bearing the characteristic thiazole side chain. The structures of the new epothilones were elucidated on the basis of comprehensive NMR and MS data. The new epothilone variants were tested in a cytotoxicity assay with mouse fibroblasts (cell line L929), and structure-activity relationships were established. Several new natural epothilones showed activity comparable to 1 and 2, but in no case exceeded that of 2.

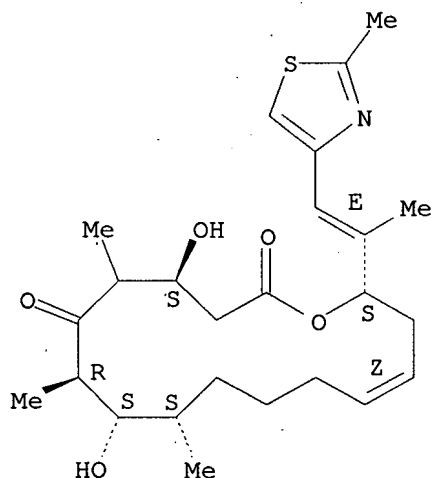
IT 252917-34-3P, Epothilone C1 252917-35-4P, Epothilone D1  
 252917-36-5P, Epothilone C2 252917-37-6P, Epothilone D2  
 252917-48-9P, trans-Epothilone C1 252917-49-0P,  
 trans-Epothilone C2

RL: BPN (Biosynthetic preparation); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)  
 (new natural epothilones from *Sorangium cellulosum*)

RN 252917-34-3 CAPLUS

CN Oxacyclohexadec-13-ene-2,6-dione, 4,8-dihydroxy-5,7,9-trimethyl-16-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (4S,7R,8S,9S,13Z,16S)- (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).  
 Double bond geometry as shown.  
 Currently available stereo shown.

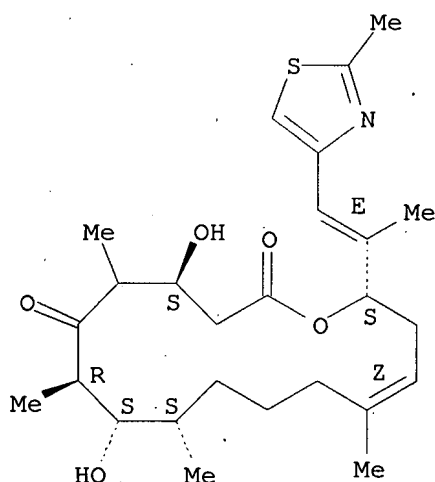


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CN Oxacyclohexadec-13-ene-2,6-dione, 4,8-dihydroxy-5,7,9,13-tetramethyl-16-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (4S,7R,8S,9S,13Z,16S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).  
 Double bond geometry as shown.

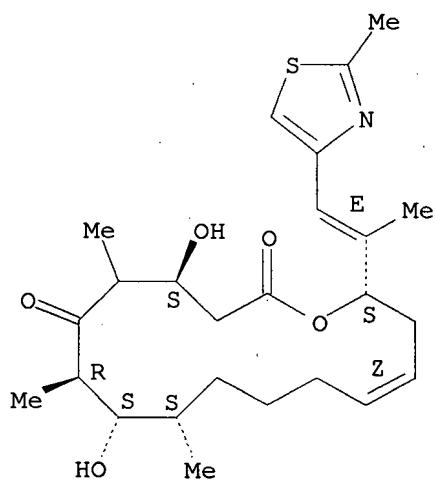
Currently available stereo shown.



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(CA INDEX NAME)

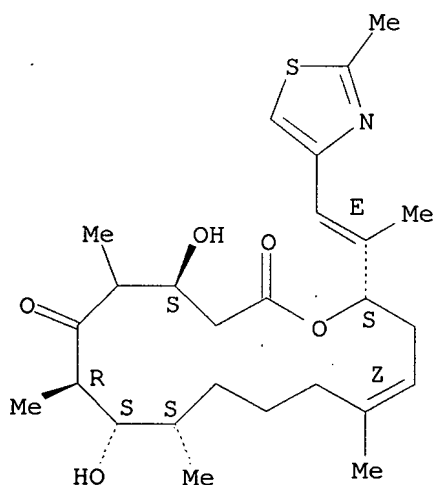
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Double bond geometry as shown.  
Currently available stereo shown.



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CN Oxacyclohexadec-13-ene-2,6-dione, 4,8-dihydroxy-5,7,9,13-tetramethyl-16-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (4S,7R,8S,9S,13Z,16S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).  
Double bond geometry as shown.  
Currently available stereo shown.



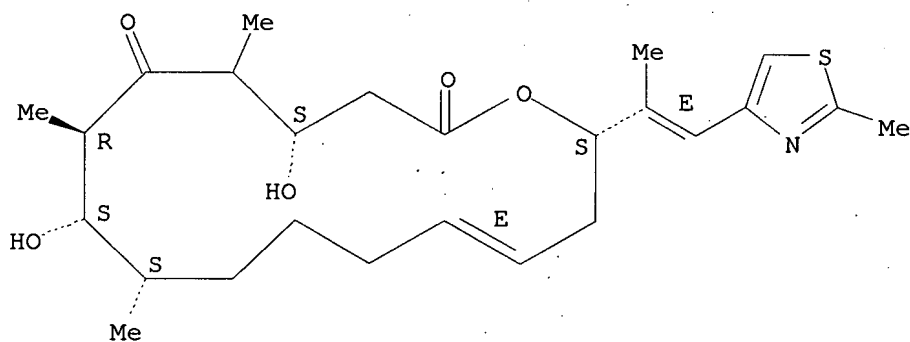
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CN Oxacyclohexadec-13-ene-2,6-dione, 4,8-dihydroxy-5,7,9-trimethyl-16-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (4S,7R,8S,9S,13E,16S)- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

Double bond geometry as shown.

Currently available stereo shown.



RN 252917-49-0 CAPLUS

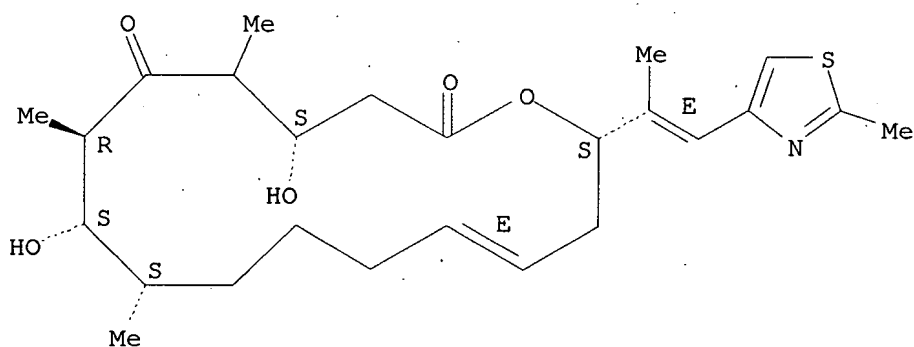
CN Oxacyclohexadec-13-ene-2,6-dione, 4,8-dihydroxy-5,7,9-trimethyl-16-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (4S,7R,8S,9S,13E,16S)- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

Double bond geometry as shown.

Currently available stereo shown.





REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:811249 CAPLUS

DOCUMENT NUMBER: 132:49105

TITLE: Epothilone minor constituents

INVENTOR(S): Hoefle, Gerhard; Reichenbach, Hans; Gerth, Klaus;

Hardt, Ingo; Sasse, Florenz; Steinmetz, Heinrich

PATENT ASSIGNEE(S): Gesellschaft Fur Biotechnologische Forschung m.b.H. (Gbf), Germany

SOURCE: PCT Int. Appl., 36 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE     |
|---|------|----------|------------------|----------|
| WO 9965913  | A2   | 19991223 | WO 1999-EP4244   | 19990618 |
| WO 9965913  | A3   | 20000420 |                  |          |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW |      |          |                  |          |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                  |          |
| DE 19826988   | A1   | 19991223 | DE 1998-19826988 | 19980618 |
| CA 2336189  | A1   | 19991223 | CA 1999-2336189  | 19990618 |
| AU 9948995  | A    | 20000105 | AU 1999-48995    | 19990618 |
| AU 757452   | B2   | 20030220 |                  |          |
| EP 1087975  | A2   | 20010404 | EP 1999-932700   | 19990618 |
| EP 1087975  | B1   | 20030827 |                  |          |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO   |      |          |                  |          |
| JP 2002518397   | T    | 20020625 | JP 2000-554738   | 19990618 |
| EP 1275648  | A1   | 20030115 | EP 2002-22332    | 19990618 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL   |      |          |                  |          |
| AT 248174   | T    | 20030915 | AT 1999-932700   | 19990618 |
| PT 1087975  | T    | 20040130 | PT 1999-932700   | 19990618 |
| ES 2207249  | T3   | 20040516 | ES 1999-932700   | 19990618 |
| US 6624310  | B1   | 20030923 | US 2001-719932   | 20010321 |
| US 2004049051   | A1   | 20040311 | US 2003-457098   | 20030606 |
| US 2006142584   | A1   | 20060629 | US 2006-354769   | 20060215 |

US 7235669  
PRIORITY APPLN. INFO.:

B2 20070626

|                  |             |
|------------------|-------------|
| DE 1998-19826988 | A 19980618  |
| EP 1999-932700   | A3 19990618 |
| WO 1999-EP4244   | W 19990618  |
| US 2001-719932   | A3 20010321 |
| US 2003-457098   | A1 20030606 |

AB The invention relates to compds. which are obtained by fermenting DSM 6773, especially epothilones A1, A2, A8, A9, B10, C1, C2, C3, C4, C5, C6, C7, C8, C9, D1, D2, D5, G1, G2, H1, H2, I1, I2, I3, I4, I5, I6 and K and trans-epothilones C1 and C2.

IT 252917-34-3P, Epothilone C1 252917-35-4P, Epothilone D1  
252917-36-5P, Epothilone C2 252917-37-6P, Epothilone D2  
252917-48-9P, trans-Epothilone C1 252917-49-0P,  
trans-Epothilone C2

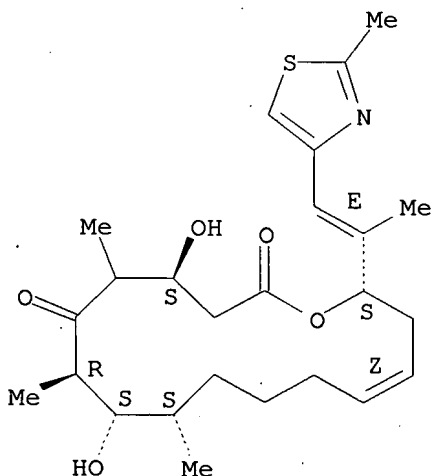
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)

(epothilone minor constituents)

RN 252917-34-3 CAPLUS

CN Oxacyclohexadec-13-ene-2,6-dione, 4,8-dihydroxy-5,7,9-trimethyl-16-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (4S,7R,8S,9S,13Z,16S)- (9CI)  
(CA INDEX NAME)

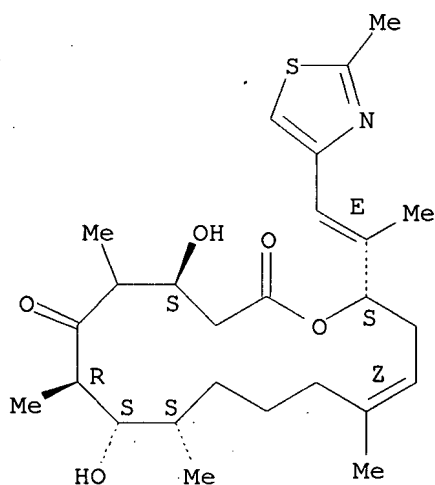
Absolute stereochemistry. Rotation (-).  
Double bond geometry as shown.  
Currently available stereo shown.



RN 252917-35-4 CAPLUS

CN Oxacyclohexadec-13-ene-2,6-dione, 4,8-dihydroxy-5,7,9,13-tetramethyl-16-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (4S,7R,8S,9S,13Z,16S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).  
Double bond geometry as shown.  
Currently available stereo shown.



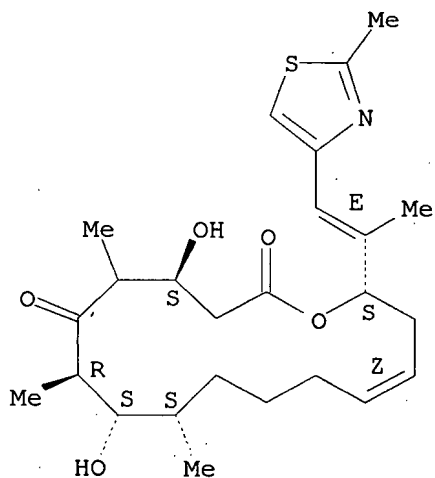
RN 252917-36-5 CAPLUS

CN Oxacyclohexadec-13-ene-2,6-dione, 4,8-dihydroxy-5,7,9-trimethyl-16-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (4S,7R,8S,9S,13Z,16S)- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

Double bond geometry as shown.

Currently available stereo shown.



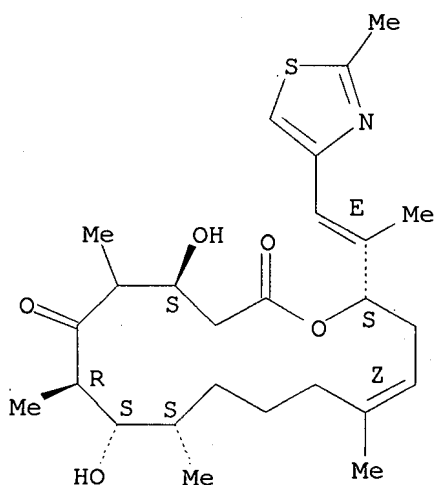
RN 252917-37-6 CAPLUS

CN Oxacyclohexadec-13-ene-2,6-dione, 4,8-dihydroxy-5,7,9,13-tetramethyl-16-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (4S,7R,8S,9S,13Z,16S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

Double bond geometry as shown.

Currently available stereo shown.



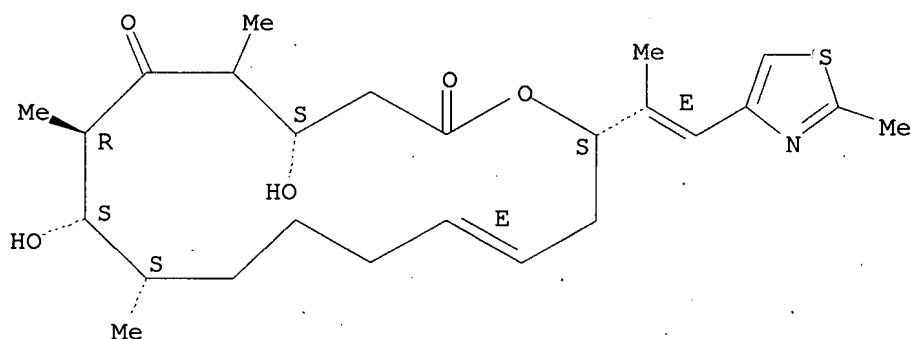
RN 252917-48-9 CAPLUS

CN Oxacyclohexadec-13-ene-2,6-dione, 4,8-dihydroxy-5,7,9-trimethyl-16-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (4S,7R,8S,9S,13E,16S)- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

Double bond geometry as shown.

Currently available stereo shown.



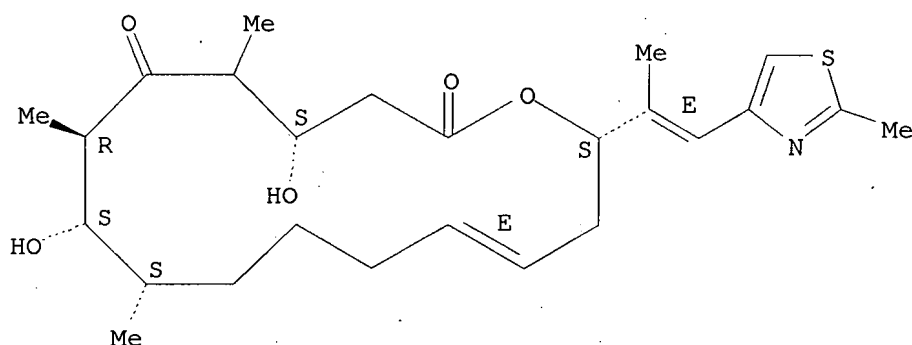
RN 252917-49-0 CAPLUS

CN Oxacyclohexadec-13-ene-2,6-dione, 4,8-dihydroxy-5,7,9-trimethyl-16-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (4S,7R,8S,9S,13E,16S)- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

Double bond geometry as shown.

Currently available stereo shown.



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L6 6 L4

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L6 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:460208 CAPLUS

DOCUMENT NUMBER: 143:171398

TITLE: Production of epothilones derivatives in Myxococcus or Sorangium comprising PKS mutant gene

INVENTOR(S): Qiu, Rongguo

PATENT ASSIGNEE(S): Beijing Huahao Zhongtian Biotechnology Co., Ltd.,  
Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, No pp.  
given

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE     |
|------------------------|------|----------|-----------------|----------|
| CN 1521258             | A    | 20040818 | CN 2003-103031  | 20030128 |
| PRIORITY APPLN. INFO.: |      |          | CN 2003-103031  | 20030128 |

OTHER SOURCE(S): CASREACT 143:171398; MARPAT 143:171398

AB Described is a method for production of epothilones derivs. in Myxococcus or Sorangium comprising PKS mutant gene. The invention also relates to the uses of these compds. in preparing medicine composition for treating tumor, inhibiting cell proliferation and growth.

IT 502619-65-0P 860300-22-7P

RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL

(Biological study); PREP (Preparation); USES (Uses)

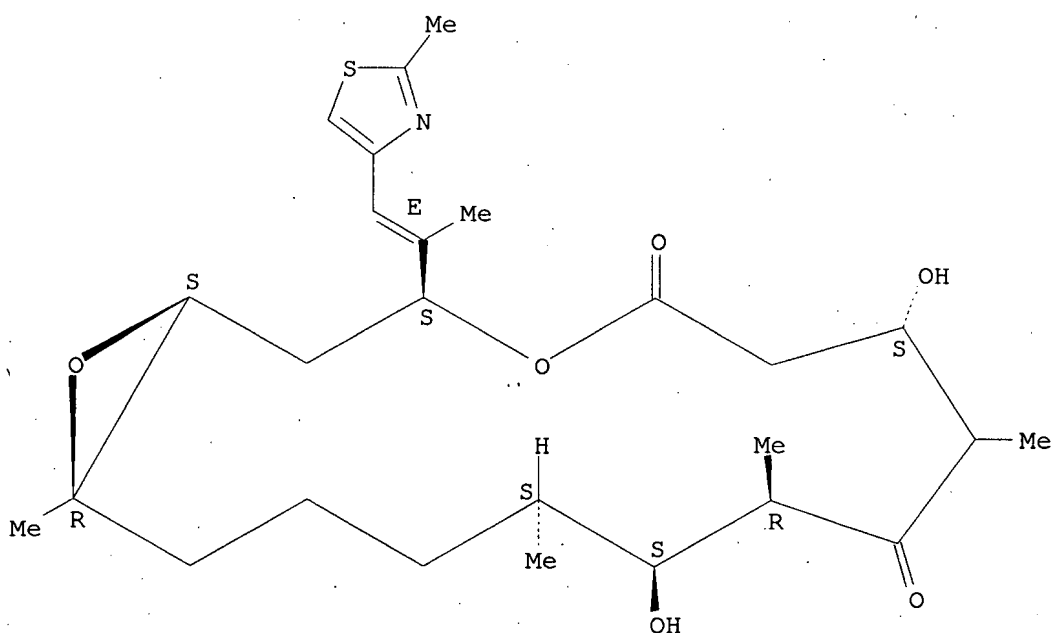
(production of epothilones derivs. in Myxococcus or Sorangium comprising  
PKS mutant gene)

RN 502619-65-0 CAPLUS

CN 4,17-Dioxabicyclo[14.1.0]heptadecane-5,9-dione, 7,11-dihydroxy-8,10,12,16-  
tetramethyl-3-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-,  
(1S,3S,7S,10R,11S,12S,16R)-(9CI) (CA INDEX NAME)

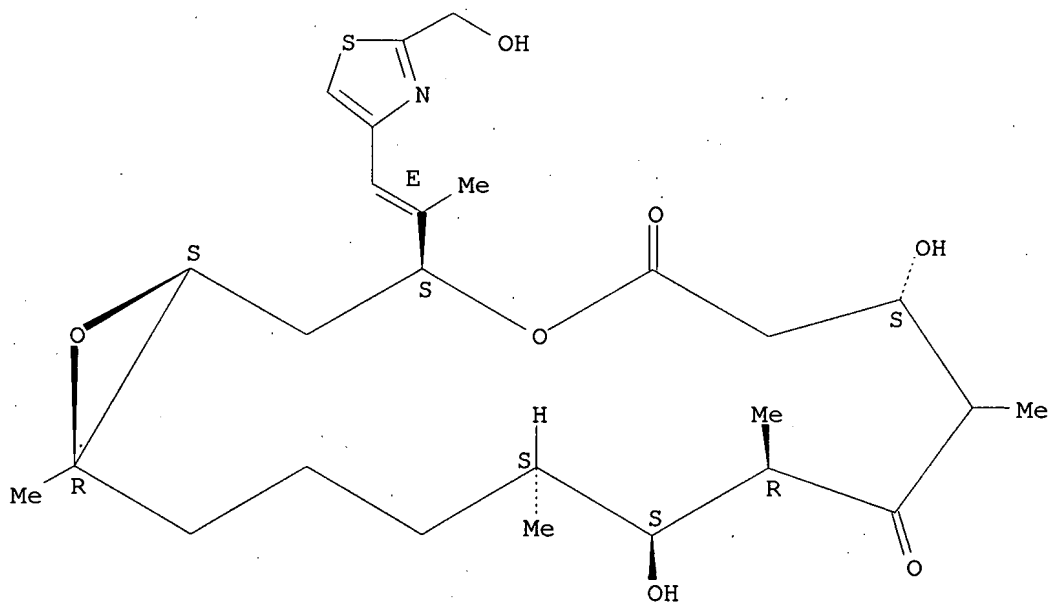
Absolute stereochemistry.

Double bond geometry as shown.



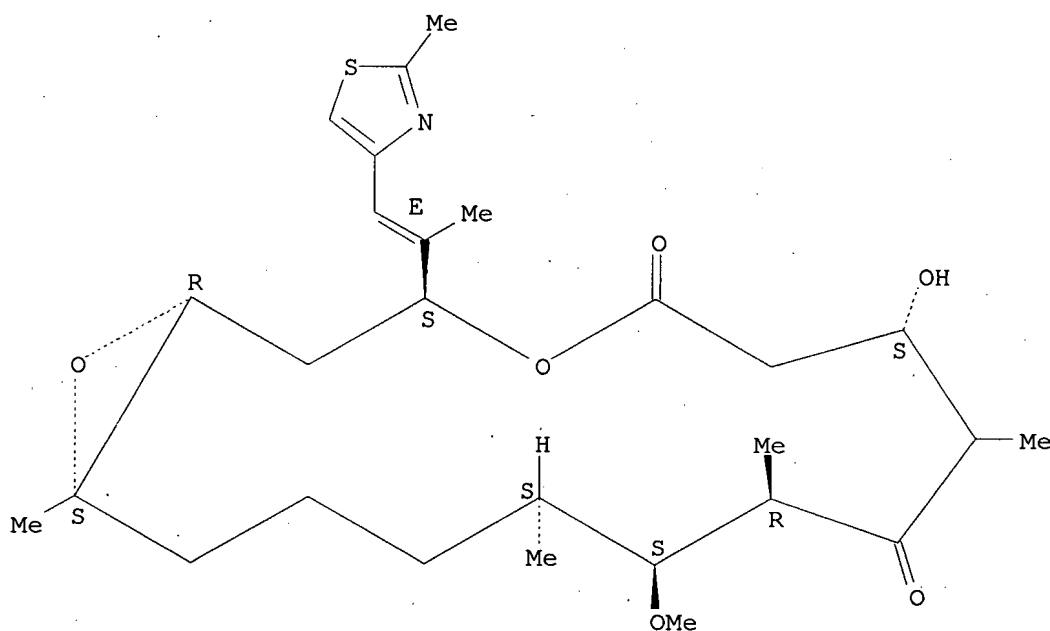
RN 860300-22-7 CAPLUS  
 CN 4,17-Dioxabicyclo[14.1.0]heptadecane-5,9-dione, 7,11-dihydroxy-3-[(1E)-2-[2-(hydroxymethyl)-4-thiazolyl]-1-methylethenyl]-8,10,12,16-tetramethyl-, (1S,3S,7S,10R,11S,12S,16R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.



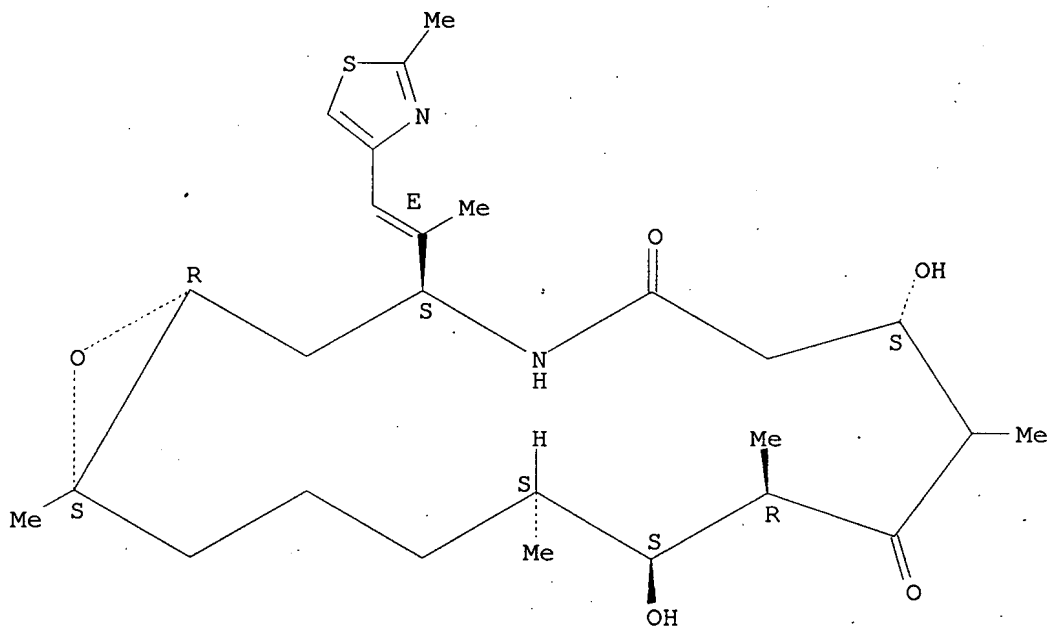
IT 860300-10-3P 860300-19-2P 860300-21-6P  
 860300-25-0P  
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (production of epothilones derivs. in Myxococcus or Sorangium comprising PKS mutant gene)  
 RN 860300-10-3 CAPLUS

Absolute stereochemistry.  
Double bond geometry as shown.



CN 17-Oxa-4-azabicyclo[14.1.0]heptadecane-5,9-dione, 7,11-dihydroxy-  
8,10,12,16-tetramethyl-3-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-,  
(1R,3S,7S,10R,11S,12S,16S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

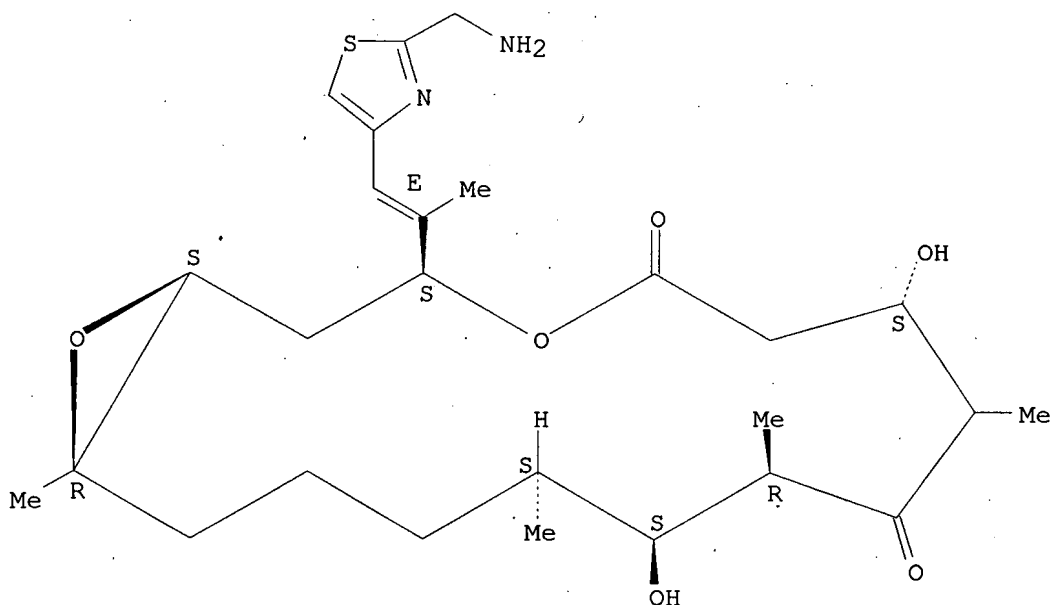


RN 860300-21-6 CAPLUS

CN 4,17-Dioxabicyclo[14.1.0]heptadecane-5,9-dione, 3-[(1E)-2-[2-(aminomethyl)-4-thiazolyl]-1-methylethenyl]-7,11-dihydroxy-8,10,12,16-tetramethyl-, (1S,3S,7S,10R,11S,12S,16R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.

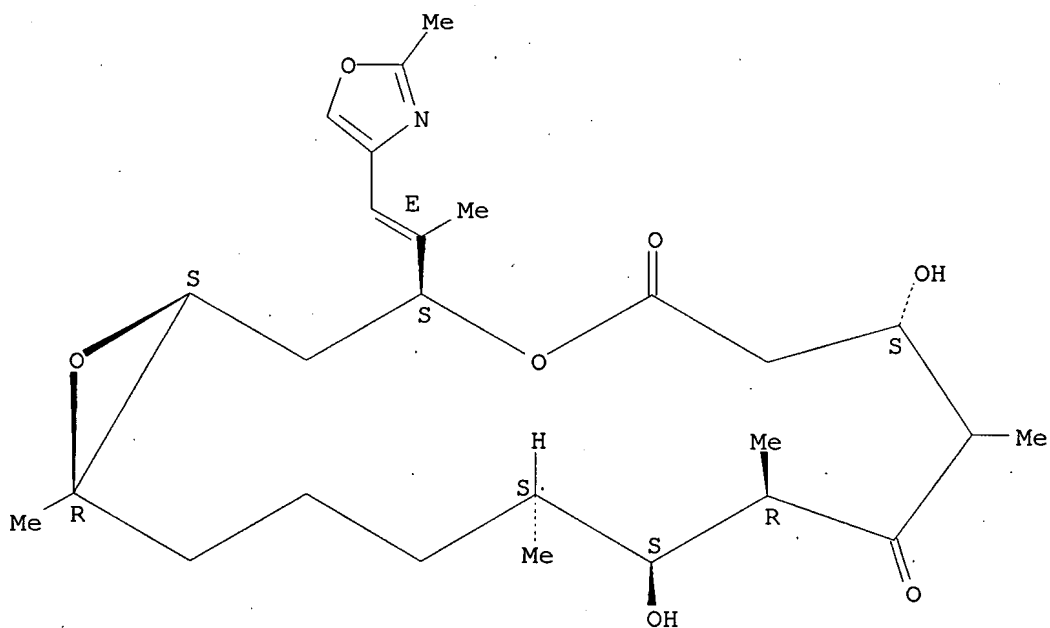


RN 860300-25-0 CAPLUS

CN 4,17-Dioxabicyclo[14.1.0]heptadecane-5,9-dione, 7,11-dihydroxy-8,10,12,16-tetramethyl-3-[(1E)-1-methyl-2-(2-methyl-4-oxazolyl)ethenyl]-, (1S,3S,7S,10R,11S,12S,16R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.





ACCESSION NUMBER: 2004:550960 CAPLUS  
 DOCUMENT NUMBER: 141:106321  
 TITLE: Preparation of epothilone derivatives for use in pharmaceutical compositions as antitumor agents  
 INVENTOR(S): Denni-Dischert, Donatienne; Floersheimer, Andreas; Kuesters, Ernst; Oberer, Lukas; Sedelmeier, Gottfried  
 PATENT ASSIGNEE(S): Novartis A.-G., Switz.; Novartis Pharma G.m.b.H.  
 SOURCE: PCT Int. Appl., 50 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE       |
|---|------|----------|------------------|------------|
| WO 2004056832   | A2   | 20040708 | WO 2003-EP14747  | 20031222   |
| WO 2004056832   | A3   | 20040910 |                  |            |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LT, LU, LV, MA, MD, MK, MN, MX, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SE, SG, SK, SY, TJ, TM, TN, TR, TT, UA, US, UZ, VC, VN, YU, ZA, ZW<br>RW: AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR |      |          |                  |            |
| CA 2510620  | A1   | 20040708 | CA 2003-2510620  | 20031222   |
| AU 2003294938   | A1   | 20040714 | AU 2003-294938   | 20031222   |
| EP 1581536  | A2   | 20051005 | EP 2003-785920   | 20031222   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK   |      |          |                  |            |
| BR 2003017693   | A    | 20051122 | BR 2003-17693    | 20031222   |
| CN 1732172  | A    | 20060208 | CN 2003-80107416 | 20031222   |
| JP 2006514025   | T    | 20060427 | JP 2004-561416   | 20031222   |
| US 2006014796   | A1   | 20060119 | US 2005-538200   | 20050609   |
| PRIORITY APPLN. INFO.:  |      |          | GB 2002-30024    | A 20021223 |
|   |      |          | WO 2003-EP14747  | W 20031222 |
| OTHER SOURCE(S): MARPAT 141:106321  |      |          |                  |            |
| GI  |      |          |                  |            |

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB C4-demethyl-epothilones or C4-bisnor-epothilones, such as I [R1, R7 = H, alkyl; R2 = nitrogen containing heteroaryl; R3 = H, Me; X = O, NR7; Z = O, bond], were prepared via fermentation and organic synthesis for use in pharmaceutical compns. as antitumor agents. Thus, C4-bisnor-epothilone B II (R3 = H) was prepared via an aldol condensation of aldehyde III with in situ disilylated (3R)-3-hydroxy-5-oxoheptanoic acid followed by a desilylation/macrolactonization reaction sequence. Also, C4-demethyl-epothilone B II (R = Me) was prepared directly by a fermentation process. The prepared epothilones were assayed for efficacy against human KB-31 and KB-8511 carcinoma cells. Drug delivery formulations containing the prepared epothilones were presented.

IT 502619-65-OP  
 RL: BPN (Biosynthetic preparation); PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological

study); PREP (Preparation); USES (Uses)

(preparation of epothilone derivs. via fermentation and organic synthesis  
for use in

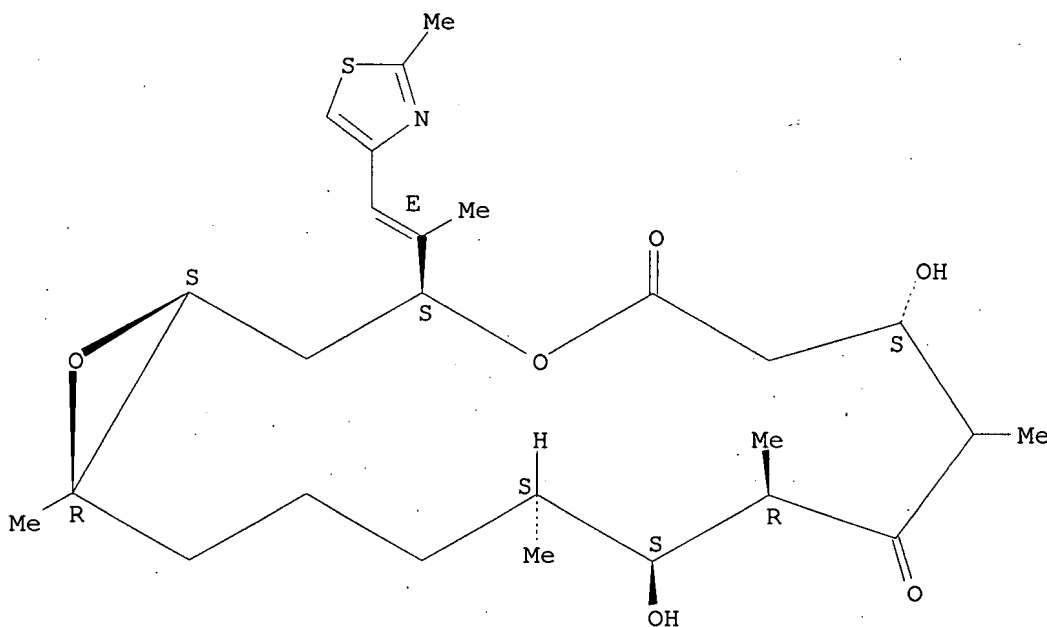
pharmaceutical compns. as antitumor agents)

RN 502619-65-0 CAPLUS

CN 4,17-Dioxabicyclo[14.1.0]heptadecane-5,9-dione, 7,11-dihydroxy-8,10,12,16-  
tetramethyl-3-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-,  
(1S,3S,7S,10R,11S,12S,16R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



IT 717917-47-0P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
(Uses)

(preparation of epothilone derivs. via fermentation and organic synthesis  
for use in

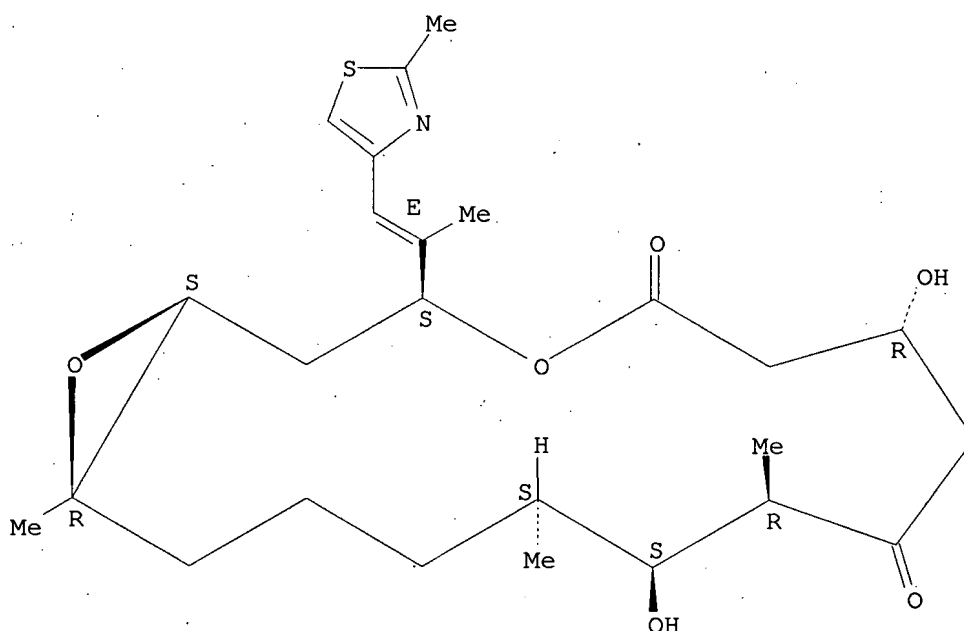
pharmaceutical compns. as antitumor agents)

RN 717917-47-0 CAPLUS

CN 4,17-Dioxabicyclo[14.1.0]heptadecane-5,9-dione, 7,11-dihydroxy-10,12,16-  
trimethyl-3-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-,  
(1S,3S,7R,10R,11S,12S,16R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



L6 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:182886 CAPLUS

DOCUMENT NUMBER: 140:217439

TITLE: Synthesis of epothilones for use in pharmaceutical compositions for the treatment of cancer

INVENTOR(S): Danishefsky, Samuel J.; Rivkin, Alexey; Yoshimura, Fumihiko; Gabarda Ortega, Ana Esther; Cho, Young Shin; Chou, Ting-Chao; Dongm, Huajin

PATENT ASSIGNEE(S): Sloan-Kettering Institute for Cancer Research, USA

SOURCE: PCT Int. Appl., 223 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| WO 2004018478   | A2   | 20040304 | WO 2003-US26367 | 20030822 |
| WO 2004018478   | A3   | 20041209 |                 |          |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                 |          |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |          |
| US 2004053995   | A1   | 20040318 | US 2003-402004  | 20030328 |
| US 6921769  | B2   | 20050726 |                 |          |
| US 2004053910   | A1   | 20040318 | US 2003-435408  | 20030509 |
| CA 2496477  | A1   | 20040304 | CA 2003-2496477 | 20030822 |
| AU 2003260002   | A1   | 20040311 | AU 2003-260002  | 20030822 |
| EP 1506203  | A2   | 20050216 | EP 2003-793304  | 20030822 |
| EP 1506203  | B1   | 20070103 |                 |          |

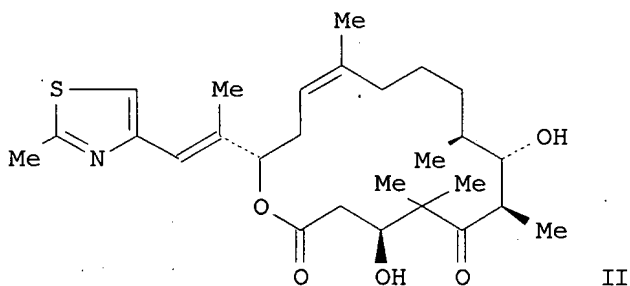
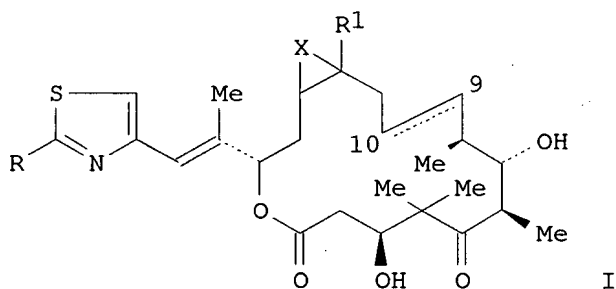
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

|                |   |          |                |          |
|----------------|---|----------|----------------|----------|
| JP 2006502246  | T | 20060119 | JP 2005-501774 | 20030822 |
| CN 1759115     | A | 20060412 | CN 2003-822561 | 20030822 |
| MX 2005PA02113 | A | 20050603 | MX 2005-PA2113 | 20050223 |
| IN 2005KN00462 | A | 20060303 | IN 2005-KN462  | 20050318 |

PRIORITY APPLN. INFO.:

|                 |   |          |
|-----------------|---|----------|
| US 2002-405823P | P | 20020823 |
| US 2002-408589P | P | 20020906 |
| US 2002-423129P | P | 20021101 |
| US 2003-456159P | P | 20030320 |
| US 2003-402004  | A | 20030328 |
| US 2003-435408  | A | 20030509 |
| US 2003-496741P | P | 20030821 |
| WO 2003-US26367 | W | 20030822 |

OTHER SOURCE(S): CASREACT 140:217439; MARPAT 140:217439  
 GI



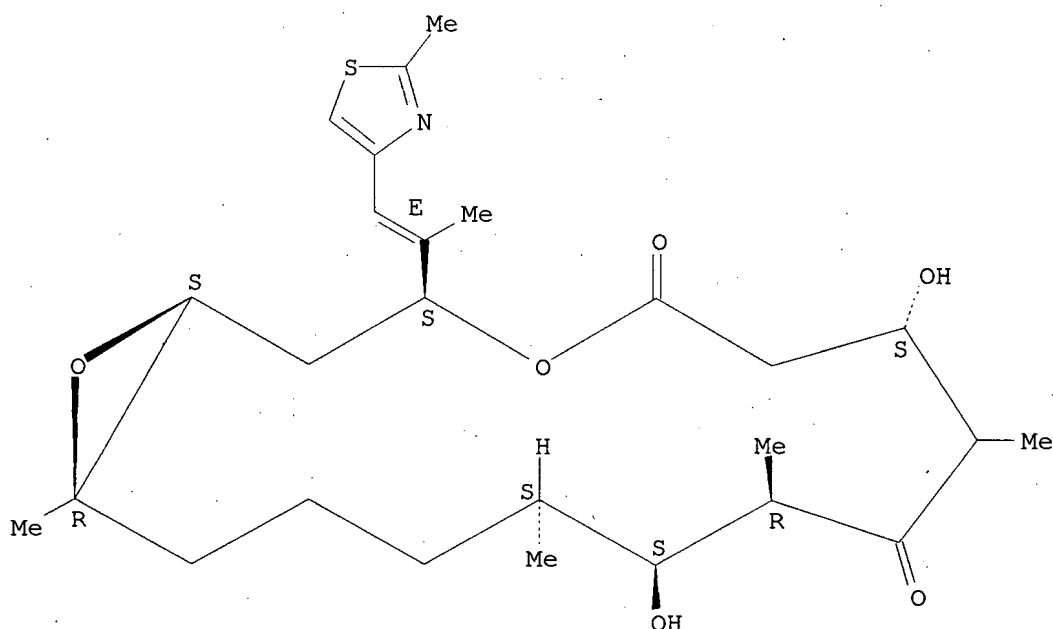
AB Epothilones, such as I [R = Me, CH<sub>2</sub>OH, CH<sub>2</sub>NH<sub>2</sub>, etc.; R<sub>1</sub> = H, Me, CF<sub>3</sub>, etc.; X = O, bond; 9,10-saturated or -unsatd.], were prepared for therapeutic use as antitumor agents. Thus, II was prepared via a multistep synthetic sequence which included an intramol. metathesis reaction to form the macrocyclic ring. The prepared epothilones were assayed for pharmacol. activity by various means which included growth inhibition of CCRF-CEM cells.

IT 502619-65-0  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (synthesis of epothilones for use in pharmaceutical compns. for the treatment of cancer)

RN 502619-65-0 CAPLUS

CN 4,17-Dioxabicyclo[14.1.0]heptadecane-5,9-dione, 7,11-dihydroxy-8,10,12,16-tetramethyl-3-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (1S,3S,7S,10R,11S,12S,16R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.



L6 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:221685 CAPLUS

DOCUMENT NUMBER: 138:255008

TITLE: Synthesis of epothilones for therapeutic use as anticancer agents

INVENTOR(S): Danishefsky, Samuel J.; Biswas, Kaustav; Chapell, Mark; Lin, Hong; Njardarson, Jon T.; Lee, Chulbom; Rivkin, Alexey; Chou, Ting-Chao

PATENT ASSIGNEE(S): Sloan-Kettering Institute for Cancer Research, USA

SOURCE: PCT Int. Appl., 219 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

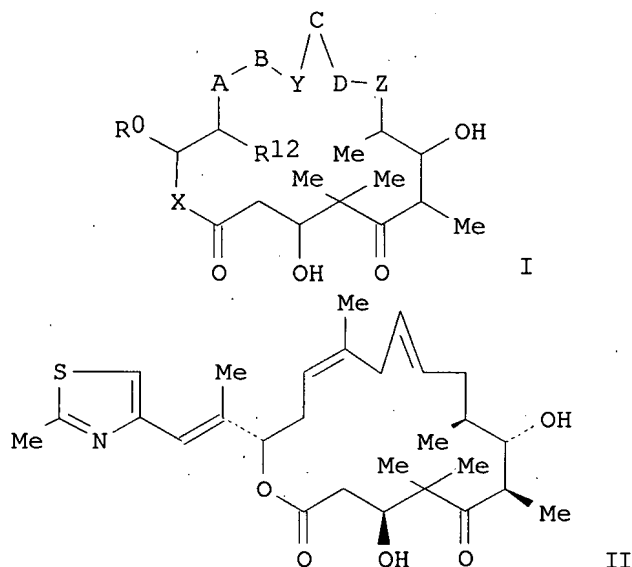
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND   | DATE     | APPLICATION NO. | DATE       |
|------------------------|--|----------|-----------------|------------|
| WO 2003022844          | A2   | 20030320 | WO 2002-US28425 | 20020906   |
| WO 2003022844          | A3   | 20040304 |                 |            |
| WO 2003022844          | A9   | 20040415 |                 |            |
| W:                     | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW |          |                 |            |
| RW:                    | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |          |                 |            |
| AU 2002329988          | A1   | 20030324 | AU 2002-329988  | 20020906   |
| US 2003176368          | A1   | 20030918 | US 2002-236135  | 20020906   |
| PRIORITY APPLN. INFO.: |  |          | US 2001-317637P | P 20010906 |
|                        |  |          | US 2001-351576P | P 20011026 |
|                        |  |          | WO 2002-US28425 | W 20020906 |

OTHER SOURCE(S): MARPAT 138:255008



AB Epothilones, such as I [R0 = aryl, heteroaryl, arylalkyl, arylalkenyl, arylalkynyl, etc.; R1, R1', R2, R2' = H, alkyl, haloalkyl, etc.; R3, R3' = H, alkyl, etc.; R12 = H, OH, NH2, halogen, alkoxy, alkylamino, etc.; A-B, C-D = C(R1):C(R2), CR1R1'CR2R2', etc.; X = O, S, CR3R3', NR3; Y = (CH2)m; Z = (CH2)q; m = 0-3, q = 1-3, and m + q = 1-4], were prepared for use in pharmaceutical compns. for the treatment of cancer. Thus, epothilone II was prepared via a multistep synthetic sequence which included an intramol. metathesis macrocyclization reaction using Grubbs' imidazole catalyst. The prepared epothilones were tested for cytotoxicity against a number of cancer cell lines.

IT 502619-65-0P

RL: PAC (Pharmacological activity); PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

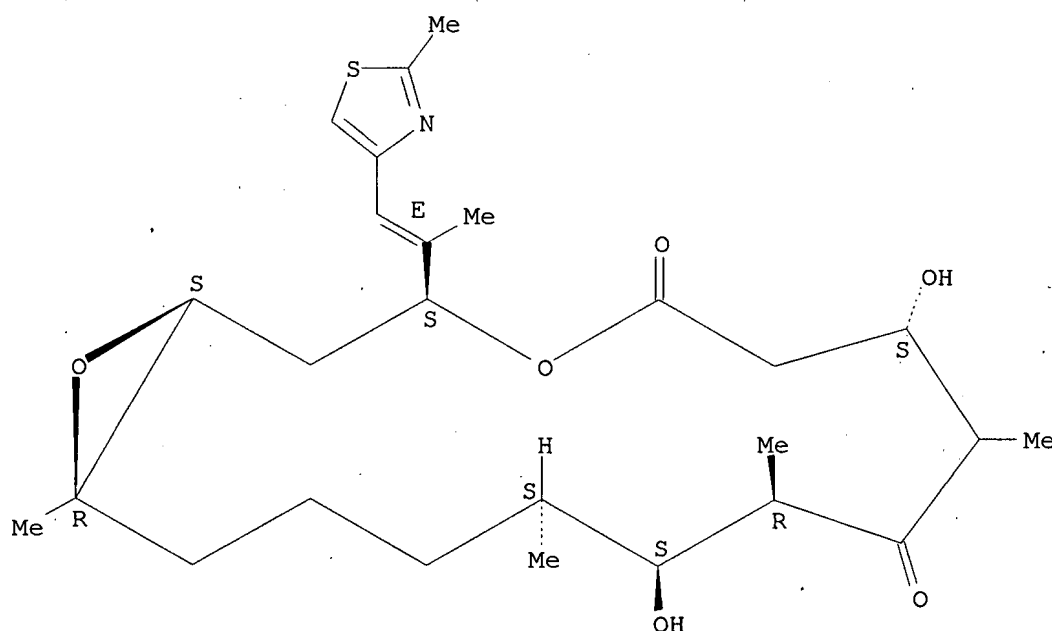
(prepn of epothilones for therapeutic use as anticancer agents)

RN 502619-65-0 CAPLUS

CN 4,17-Dioxabicyclo[14.1.0]heptadecane-5,9-dione, 7,11-dihydroxy-8,10,12,16-tetramethyl-3-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (1S,3S,7S,10R,11S,12S,16R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



L6 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:413810 CAPLUS

DOCUMENT NUMBER: 135:179755

TITLE: New Natural Epothilones from *Sorangium cellulosum*, Strains So ce90/B2 and So ce90/D13: Isolation, Structure Elucidation, and SAR Studies

AUTHOR(S): Hardt, Ingo H.; Steinmetz, Heinrich; Gerth, Klaus; Sasse, F.; Reichenbach, Hans; Hoefle, Gerhard

CORPORATE SOURCE: Gesellschaft fuer Biotechnologische Forschung mbH, Braunschweig, D-38124, Germany

SOURCE: Journal of Natural Products (2001), 64(7), 847-856  
CODEN: JNPRDF; ISSN: 0163-3864

PUBLISHER: American Chemical Society

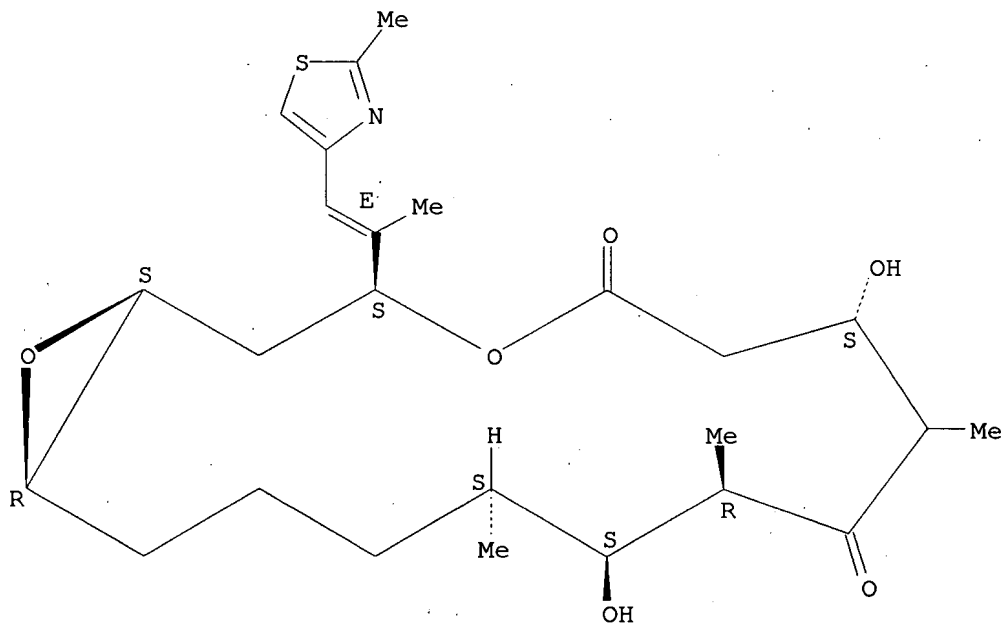
DOCUMENT TYPE: Journal

LANGUAGE: English

AB In addition to epothilones A (1) and B (2), 37 natural epothilone variants and epothilone-related compds. were isolated from the culture broth of a 700 L fermentation of *Sorangium cellulosum*, strain So ce90/B2. Of these, only the 12,13-desoxyepothilones, epothilone C (14) and D (15), were produced in significant amts. (3-6 mg/L); the 21-hydroxy derivs. and epothilones E (3) and F (4), in low and variable amts. due to further degradation by the producing organism. Most of the other epothilone variants were produced only in 1-100 µg/L amts. The new compds. are very similar in structure to the parent compds. 1, 2 and 14, 15 and are presumably the result of the imperfect selectivity of the biosynthetic enzymes for acetate and propionate. Further, epothilones containing an oxazole moiety (10-13) in the side chain instead of a thiazole as well as ring-expanded 18-membered macrolides, epothilones I (30-35), and a ring contracted 14-membered macrolide, epothilone K (36), were found as very minor metabolites. The mutant strain, So ce90/D13, instead of macrolactones, produced short-chain carboxylic acids 40, 41, and 42 bearing the characteristic thiazole side chain. The structures of the new epothilones were elucidated on the basis of comprehensive NMR and MS data. The new epothilone variants were tested in a cytotoxicity assay with mouse fibroblasts (cell line L929), and structure-activity relationships were established. Several new natural epothilones showed activity comparable to 1 and 2, but in no case exceeded that of 2.

IT 252917-29-6P, Epothilone A1 252917-30-9P, Epothilone A2  
 RL: BPN (Biosynthetic preparation); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)  
 (new natural epothilones from Sorangium cellulosum)  
 RN 252917-29-6 CAPLUS  
 CN 4,17-Dioxabicyclo[14.1.0]heptadecane-5,9-dione, 7,11-dihydroxy-8,10,12-trimethyl-3-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (1S,3S,7S,10R,11S,12S,16R)- (9CI) (CA INDEX NAME)

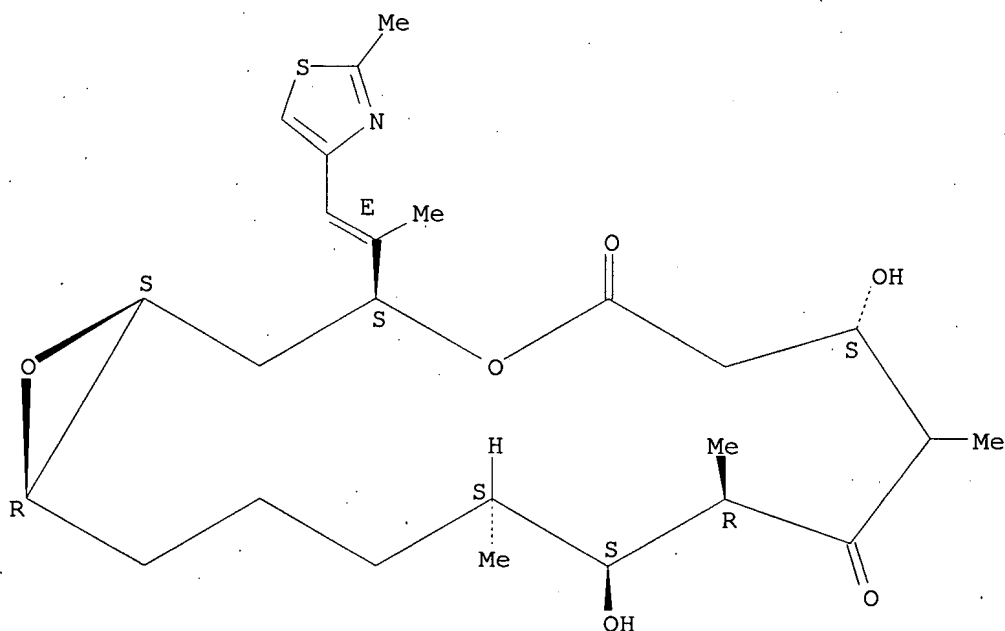
Absolute stereochemistry. Rotation (-).  
 Double bond geometry as shown.  
 Currently available stereo shown.



RN 252917-30-9 CAPLUS  
 CN 4,17-Dioxabicyclo[14.1.0]heptadecane-5,9-dione, 7,11-dihydroxy-8,10,12-trimethyl-3-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (1S,3S,7S,10R,11S,12S,16R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).  
 Double bond geometry as shown.  
 Currently available stereo shown.





REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:811249 CAPLUS

DOCUMENT NUMBER: 132:49105

TITLE: Epothilone minor constituents

INVENTOR(S): Hoefle, Gerhard; Reichenbach, Hans; Gerth, Klaus;

Hardt, Ingo; Sasse, Florenz; Steinmetz, Heinrich

PATENT ASSIGNEE(S): Gesellschaft Fur Biotechnologische Forschung m.b.H. (Gbf), Germany

SOURCE: PCT Int. Appl., 36 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE     |
|---|------|----------|------------------|----------|
| WO 9965913  | A2   | 19991223 | WO 1999-EP4244   | 19990618 |
| WO 9965913  | A3   | 20000420 |                  |          |
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| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                  |          |
| DE 19826988   | A1   | 19991223 | DE 1998-19826988 | 19980618 |
| CA 2336189  | A1   | 19991223 | CA 1999-2336189  | 19990618 |
| AU 9948995  | A    | 20000105 | AU 1999-48995    | 19990618 |
| AU 757452   | B2   | 20030220 |                  |          |
| EP 1087975  | A2   | 20010404 | EP 1999-932700   | 19990618 |
| EP 1087975  | B1   | 20030827 |                  |          |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO   |      |          |                  |          |

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|---|----|----------|----------------|----------|
| JP 2002518397   | T  | 20020625 | JP 2000-554738 | 19990618 |
| EP 1275648  | A1 | 20030115 | EP 2002-22332  | 19990618 |
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| AT 248174   | T  | 20030915 | AT 1999-932700 | 19990618 |
| PT 1087975  | T  | 20040130 | PT 1999-932700 | 19990618 |
| ES 2207249  | T3 | 20040516 | ES 1999-932700 | 19990618 |
| US 6624310  | B1 | 20030923 | US 2001-719932 | 20010321 |
| US 2004049051   | A1 | 20040311 | US 2003-457098 | 20030606 |
| US 2006142584   | A1 | 20060629 | US 2006-354769 | 20060215 |
| US 7235669  | B2 | 20070626 |                |          |

PRIORITY APPLN. INFO.:

|                  |    |          |
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| DE 1998-19826988 | A  | 19980618 |
| EP 1999-932700   | A3 | 19990618 |
| WO 1999-EP4244   | W  | 19990618 |
| US 2001-719932   | A3 | 20010321 |
| US 2003-457098   | A1 | 20030606 |

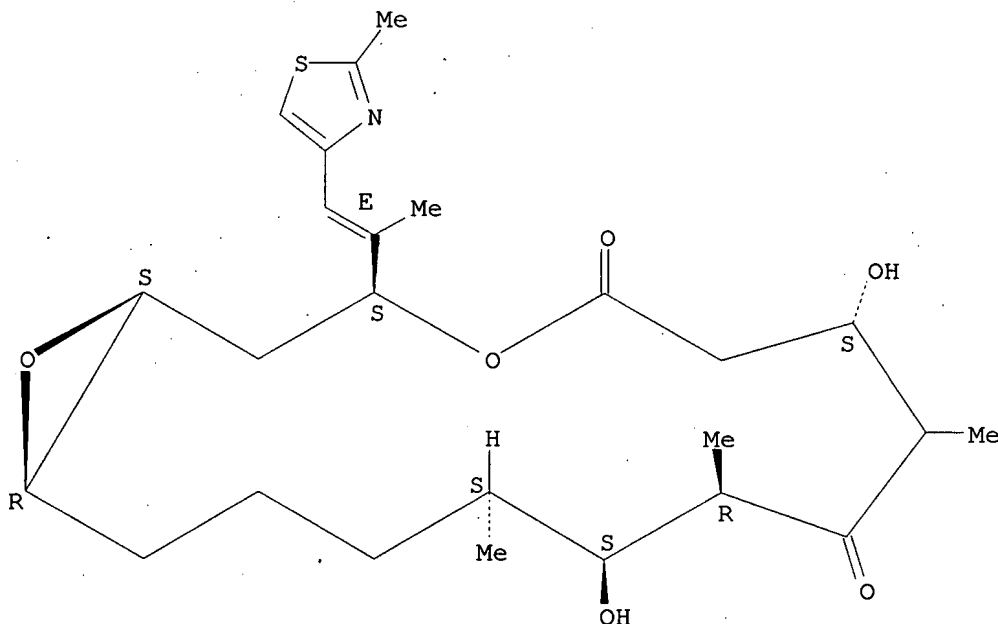
AB The invention relates to compds. which are obtained by fermenting DSM 6773, especially epothilones A1, A2, A8, A9, B10, C1, C2, C3, C4, C5, C6, C7, C8, C9, D1, D2, D5, G1, G2, H1, H2, I1, I2, I3, I4, I5, I6 and K and trans-epothilones C1 and C2.

IT 252917-29-6P, Epothilone A1 252917-30-9P, Epothilone A2  
 RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)  
 (epothilone minor constituents)

RN 252917-29-6 CAPLUS

CN 4,17-Dioxabicyclo[14.1.0]heptadecane-5,9-dione, 7,11-dihydroxy-8,10,12-trimethyl-3-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-, (1S,3S,7S,10R,11S,12S,16R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).  
 Double bond geometry as shown.  
 Currently available stereo shown.

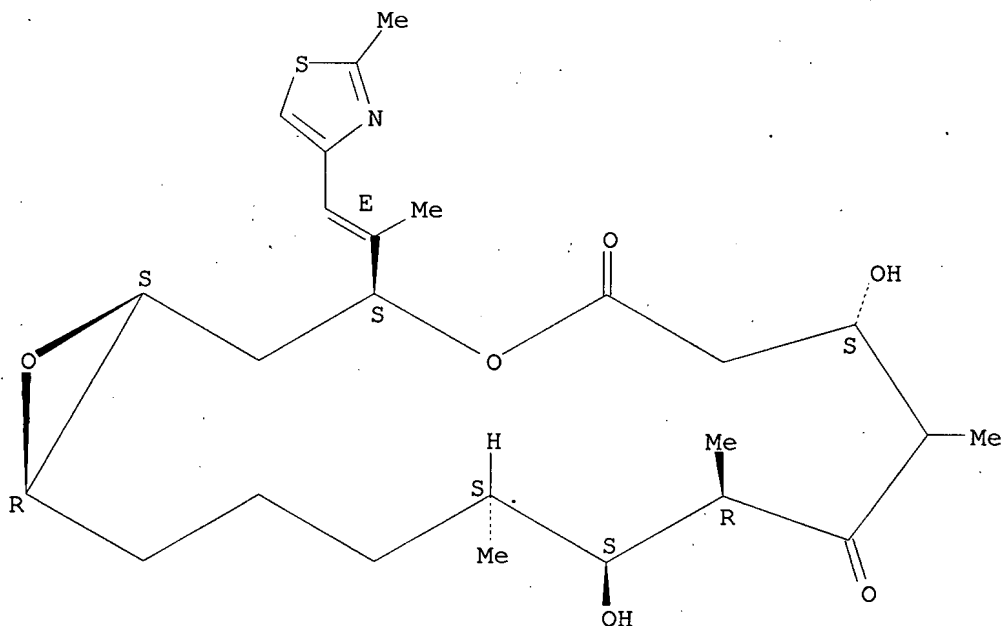


RN 252917-30-9 CAPLUS

CN 4,17-Dioxabicyclo[14.1.0]heptadecane-5,9-dione, 7,11-dihydroxy-8,10,12-

trimethyl-3-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-,  
(1S,3S,7S,10R,11S,12S,16R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).  
Double bond geometry as shown.  
Currently available stereo shown.



=> d his

(FILE 'HOME' ENTERED AT 10:19:07 ON 13 AUG 2007)

FILE 'REGISTRY' ENTERED AT 10:19:20 ON 13 AUG 2007

L1 STRUCTURE UPLOADED  
L2 STRUCTURE UPLOADED  
L3 14 S L1 FULL  
L4 9 S L2 FULL

FILE 'CAPLUS' ENTERED AT 10:20:57 ON 13 AUG 2007

L5 3 S L3 FULL  
L6 6 S L4 FULL

=> log y

COST IN U.S. DOLLARS

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|------------------|---------------|
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FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

| SINCE FILE ENTRY | TOTAL SESSION |
|------------------|---------------|
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| NEWS | 3  | MAY 08 | CA/CAPplus Indian patent publication number format defined          |
| NEWS | 4  | MAY 14 | RDISCLOSURE on STN Easy enhanced with new search and display fields |
| NEWS | 5  | MAY 21 | BIOSIS reloaded and enhanced with archival data                     |
| NEWS | 6  | MAY 21 | TOXCENTER enhanced with BIOSIS reload                               |
| NEWS | 7  | MAY 21 | CA/CAPplus enhanced with additional kind codes for German patents   |
| NEWS | 8  | MAY 22 | CA/CAPplus enhanced with IPC reclassification in Japanese patents   |
| NEWS | 9  | JUN 27 | CA/CAPplus enhanced with pre-1967 CAS Registry Numbers              |
| NEWS | 10 | JUN 29 | STN Viewer now available  |
| NEWS | 11 | JUN 29 | STN Express, Version 8.2, now available                             |
| NEWS | 12 | JUL 02 | LEMBASE coverage updated  |
| NEWS | 13 | JUL 02 | LMEDLINE coverage updated   |
| NEWS | 14 | JUL 02 | SCISEARCH enhanced with complete author names                       |
| NEWS | 15 | JUL 02 | CHEMCATS accession numbers revised                                  |
| NEWS | 16 | JUL 02 | CA/CAPplus enhanced with utility model patents from China           |
| NEWS | 17 | JUL 16 | CAPplus enhanced with French and German abstracts                   |
| NEWS | 18 | JUL 18 | CA/CAPplus patent coverage enhanced                                 |
| NEWS | 19 | JUL 26 | USPATFULL/USPAT2 enhanced with IPC reclassification                 |
| NEWS | 20 | JUL 30 | USGENE now available on STN   |
| NEWS | 21 | AUG 06 | CAS REGISTRY enhanced with new experimental property tags           |
| NEWS | 22 | AUG 06 | BEILSTEIN updated with new compounds                                |
| NEWS | 23 | AUG 06 | FSTA enhanced with new thesaurus edition                            |
| NEWS | 24 | AUG 13 | CA/CAPplus enhanced with additional kind codes for granted patents  |

NEWS EXPRESS 29 JUNE 2007: CURRENT WINDOWS VERSION IS V8.2,  
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 05 JULY 2007.

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DICTIONARY FILE UPDATES: 12 AUG 2007 HIGHEST RN 944447-30-7

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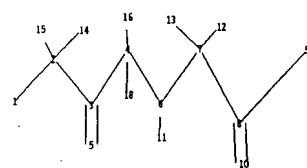
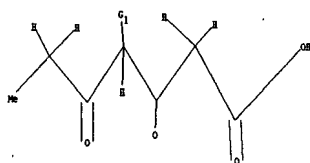
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<http://www.cas.org/support/stngen/stndoc/properties.html>

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chain bonds :

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8-10

exact/norm bonds :

3-5 4-16 6-11

exact bonds :

1-2 2-3 2-14 2-15 3-4 4-6 4-18 6-7 7-8 7-12 7-13

normalized bonds :

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G1:H,C

Match level :

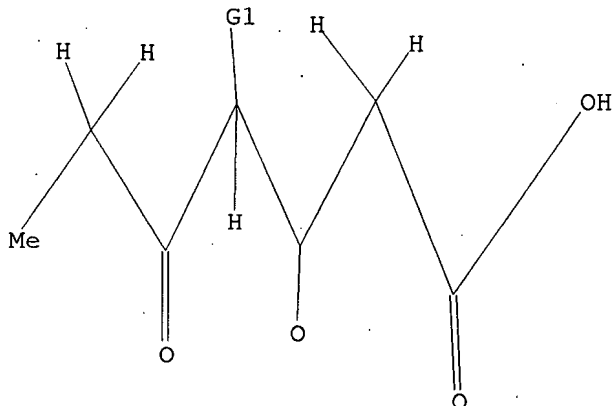
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10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 18:CLASS

L1 STRUCTURE UPLOADED

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L1 HAS NO ANSWERS

L1 STR



G1 H,C

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FULL SEARCH INITIATED 10:25:50 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 113937 TO ITERATE

100.0% PROCESSED 113937 ITERATIONS

3 ANSWERS

SEARCH TIME: 00.00.02

L2 3 SEA SSS FUL L1

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TOTAL

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FULL ESTIMATED COST

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172.31

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FILE LAST UPDATED: 12 Aug 2007 (20070812/ED)

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L3 NOT FOUND

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L3 2 L2

=> d ibib abs hitstr tot

L3 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:1068138 CAPLUS

DOCUMENT NUMBER: 142:197448

TITLE: Highly Efficient Nickel-Catalyzed Cross-Coupling of Succinic and Glutaric Anhydrides with Organozinc Reagents

AUTHOR(S): Bercot, Eric A.; Rovis, Tomislav

CORPORATE SOURCE: Department of Chemistry, Colorado State University, Fort Collins, CO, 80523, USA

SOURCE: Journal of the American Chemical Society (2005), 127(1), 247-254

CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 142:197448

AB A nickel-catalyzed alkylation of succinic and glutaric anhydrides with alkyl- and arylzinc reagents has been developed. A dramatic olefin effect has been investigated resulting in the identification of several styrene-based promoters which show pronounced enhancements in reaction rate. The substrate scope with respect to electrophilic and nucleophilic coupling partners has been examined and found to be remarkably broad, allowing for rapid introduction of mol. complexity through the use of functionalized coupling partners. Regioselective alkylation of an unsym. succinic anhydride and a profound effect of pendent coordinating olefins on reaction rate suggest a mechanism involving discrete oxidative addition of the nickel complex into the cyclic anhydride followed by a transmetalation event.

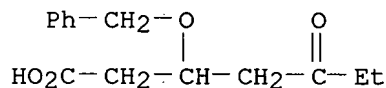
IT 838906-37-9P 838906-40-4P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(alkylation on nickel-catalyzed cross-coupling of succinic and glutaric anhydrides with organozinc reagents)

RN 838906-37-9 CAPLUS

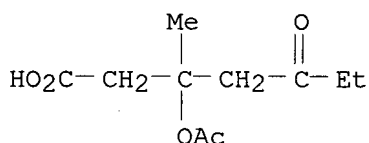
CN Heptanoic acid, 5-oxo-3-(phenylmethoxy)- (9CI) (CA INDEX NAME)



RN 838906-40-4 CAPLUS

CN Heptanoic acid, 3-(acetyloxy)-3-methyl-5-oxo- (9CI) (CA INDEX NAME)





REFERENCE COUNT: 82 THERE ARE 82 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:550960 CAPLUS

DOCUMENT NUMBER: 141:106321

TITLE: Preparation of epothilone derivatives for use in pharmaceutical compositions as antitumor agents

INVENTOR(S): Denni-Dischert, Donatienne; Floersheimer, Andreas;

PATENT ASSIGNEE(S): Kuesters, Ernst; Oberer, Lukas; Sedelmeier, Gottfried  
Novartis A.-G., Switz.; Novartis Pharma G.m.b.H.

SOURCE: PCT Int. Appl., 50 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE              | APPLICATION NO.  | DATE       |
|---|------|-------------------|------------------|------------|
| WO 2004056832   | A2   | 20040708          | WO 2003-EP14747  | 20031222   |
| WO 2004056832   | A3   | 20040910          |                  |            |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LT, LU, LV, MA, MD, MK, MN, MX, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SE, SG, SK, SY, TJ, TM, TN, TR, TT, UA, US, UZ, VC, VN, YU, ZA, ZW |      |                   |                  |            |
| RW: AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR  |      |                   |                  |            |
| CA 2510620  | A1   | 20040708          | CA 2003-2510620  | 20031222   |
| AU 2003294938   | A1   | 20040714          | AU 2003-294938   | 20031222   |
| EP 1581536  | A2   | 20051005          | EP 2003-785920   | 20031222   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK   |      |                   |                  |            |
| BR 2003017693   | A    | 20051122          | BR 2003-17693    | 20031222   |
| CN 1732172  | A    | 20060208          | CN 2003-80107416 | 20031222   |
| JP 2006514025   | T    | 20060427          | JP 2004-561416   | 20031222   |
| US 2006014796   | A1   | 20060119          | US 2005-538200   | 20050609   |
| PRIORITY APPLN. INFO.:  |      |                   | GB 2002-30024    | A 20021223 |
|   |      |                   | WO 2003-EP14747  | W 20031222 |
| OTHER SOURCE(S):  |      | MARPAT 141:106321 |                  |            |
| GI  |      |                   |                  |            |

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB C4-demethyl-epothilones or C4-bisnor-epothilones, such as I [R1, R7 = H, alkyl; R2 = nitrogen containing heteroaryl; R3 = H, Me; X = O, NR7; Z = O, bond], were prepared via fermentation and organic synthesis for use in pharmaceutical compns. as antitumor agents. Thus, C4-bisnor-epothilone B II (R3 = H) was

prepared via an aldol condensation of aldehyde III with in situ disilylated (3R)-3-hydroxy-5-oxoheptanoic acid followed by a desilylation/macrolactonization reaction sequence. Also, C4-demethyl-epothilone B II (R = Me) was prepared directly by a fermentation process. The prepared epothilones were assayed for efficacy against human KB-31 and KB-8511 carcinoma cells. Drug delivery formulations containing the prepared epothilones were presented.

IT 717917-50-5, (3R)-3-Hydroxy-5-oxoheptanoic acid

RL: RCT (Reactant); RACT (Reactant or reagent)

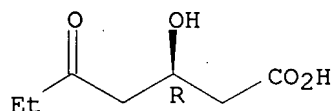
(preparation of epothilone derivs. via fermentation and organic synthesis for use in

pharmaceutical compns. as antitumor agents)

RN 717917-50-5 CAPLUS

CN Heptanoic acid, 3-hydroxy-5-oxo-, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> d his

(FILE 'HOME' ENTERED AT 10:24:33 ON 13 AUG 2007)

FILE 'REGISTRY' ENTERED AT 10:25:05 ON 13 AUG 2007

L1 STRUCTURE UPLOADED

L2 3 S L1 FULL

FILE 'CAPLUS' ENTERED AT 10:25:57 ON 13 AUG 2007

L3 2 S L2 FULL

=> log y

COST IN U.S. DOLLARS

| SINCE FILE | TOTAL   |
|------------|---------|
| ENTRY      | SESSION |
| 11.01      | 183.32  |

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

| SINCE FILE | TOTAL   |
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| ENTRY      | SESSION |
| -1.56      | -1.56   |

CA SUBSCRIBER PRICE

STN INTERNATIONAL LOGOFF AT 10:26:24 ON 13 AUG 2007

cl 13

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTANXR1625

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

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|      |    |        |   |
|------|----|--------|---|
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| NEWS | 3  | MAY 08 | CA/CAPplus Indian patent publication number format defined          |
| NEWS | 4  | MAY 14 | RDISCLOSURE on STN Easy enhanced with new search and display fields |
| NEWS | 5  | MAY 21 | BIOSIS reloaded and enhanced with archival data                     |
| NEWS | 6  | MAY 21 | TOXCENTER enhanced with BIOSIS reload                               |
| NEWS | 7  | MAY 21 | CA/CAPplus enhanced with additional kind codes for German patents   |
| NEWS | 8  | MAY 22 | CA/CAPplus enhanced with IPC reclassification in Japanese patents   |
| NEWS | 9  | JUN 27 | CA/CAPplus enhanced with pre-1967 CAS Registry Numbers              |
| NEWS | 10 | JUN 29 | STN Viewer now available  |
| NEWS | 11 | JUN 29 | STN Express, Version 8.2, now available                             |
| NEWS | 12 | JUL 02 | LEMBASE coverage updated  |
| NEWS | 13 | JUL 02 | LMEDLINE coverage updated   |
| NEWS | 14 | JUL 02 | SCISEARCH enhanced with complete author names                       |
| NEWS | 15 | JUL 02 | CHEMCATS accession numbers revised                                  |
| NEWS | 16 | JUL 02 | CA/CAPplus enhanced with utility model patents from China           |
| NEWS | 17 | JUL 16 | CAPplus enhanced with French and German abstracts                   |
| NEWS | 18 | JUL 18 | CA/CAPplus patent coverage enhanced                                 |
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| NEWS | 20 | JUL 30 | USGENE now available on STN   |
| NEWS | 21 | AUG 06 | CAS REGISTRY enhanced with new experimental property tags           |
| NEWS | 22 | AUG 06 | BEILSTEIN updated with new compounds                                |
| NEWS | 23 | AUG 06 | FSTA enhanced with new thesaurus edition                            |
| NEWS | 24 | AUG 13 | CA/CAPplus enhanced with additional kind codes for granted patents  |

NEWS EXPRESS 29 JUNE 2007: CURRENT WINDOWS VERSION IS V8.2,  
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
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\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 10:27:04 ON 13 AUG 2007

=> FILE REG

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 10:27:27 ON 13 AUG 2007

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STRUCTURE FILE UPDATES: 12 AUG 2007 HIGHEST RN 944447-30-7

DICTIONARY FILE UPDATES: 12 AUG 2007 HIGHEST RN 944447-30-7

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

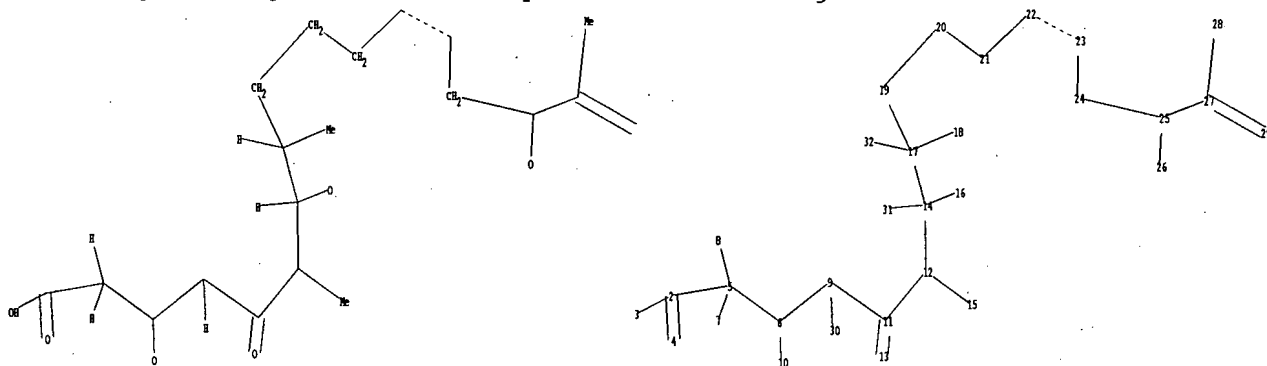
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10538200g.str



chain nodes :

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24  
25 26 27 28 29 30 31 32

chain bonds :

2-3 2-4 2-5 5-6 5-7 5-8 6-9 6-10 9-11 9-30 11-12 11-13 12-14 12-15  
14-16 14-17 14-31 17-18 17-19 17-32 19-20 20-21 21-22 22-23 23-24 24-25  
25-26 25-27 27-28 27-29

exact/norm. bonds :  
 6-10 11-13 14-16 22-23 25-26  
 exact bonds :  
 2-5 5-6 5-7 5-8 6-9 9-11 9-30 11-12 12-14 12-15 14-17 14-31 17-18  
 17-19 17-32 19-20 20-21 21-22 23-24 24-25 25-27 27-28 27-29  
 normalized bonds :  
 2-3 2-4

G1:H,C

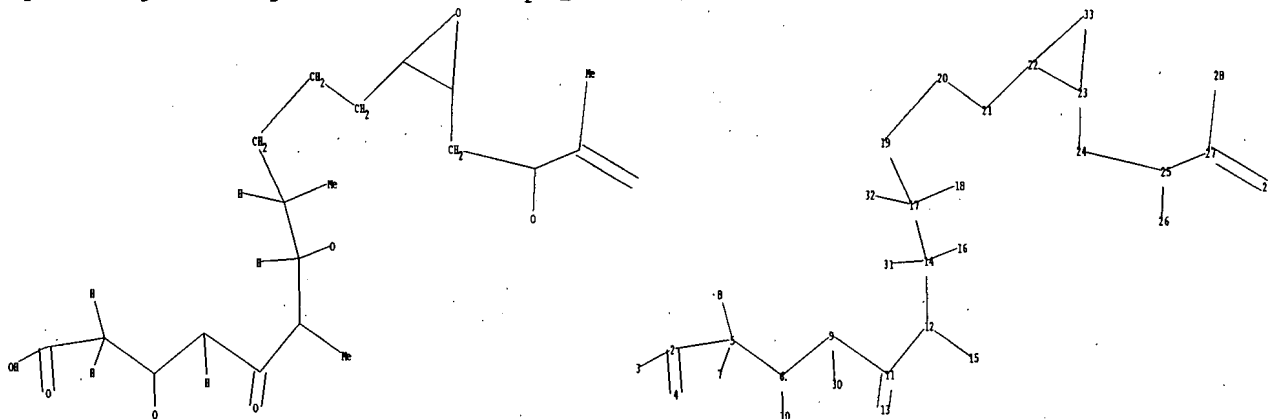
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 19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS 26:CLASS  
 27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS

L1 STRUCTURE UPLOADED

=>

Uploading C:\Program Files\Stnexp\Queries\10538200c.str



chain nodes :  
 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 24 25 26  
 27 28 29 30 31 32  
 ring nodes :  
 22 23 33  
 chain bonds :  
 2-3 2-4 2-5 5-6 5-7 5-8 6-9 6-10 9-11 9-30 11-12 11-13 12-14 12-15  
 14-16 14-17 14-31 17-18 17-19 17-32 19-20 20-21 21-22 23-24 24-25 25-26  
 25-27 27-28 27-29  
 ring bonds :  
 22-23 22-33 23-33  
 exact/norm bonds :  
 6-10 11-13 14-16 22-23 22-33 23-33 25-26  
 exact bonds :

2-5 5-6 5-7 5-8 6-9 9-11 9-30 11-12 12-14 12-15 14-17 14-31 17-18  
 17-19 17-32 19-20 20-21 21-22 23-24 24-25 25-27 27-28 27-29  
 normalized bonds :  
 2-3 2-4

G1:H,C

Match level :

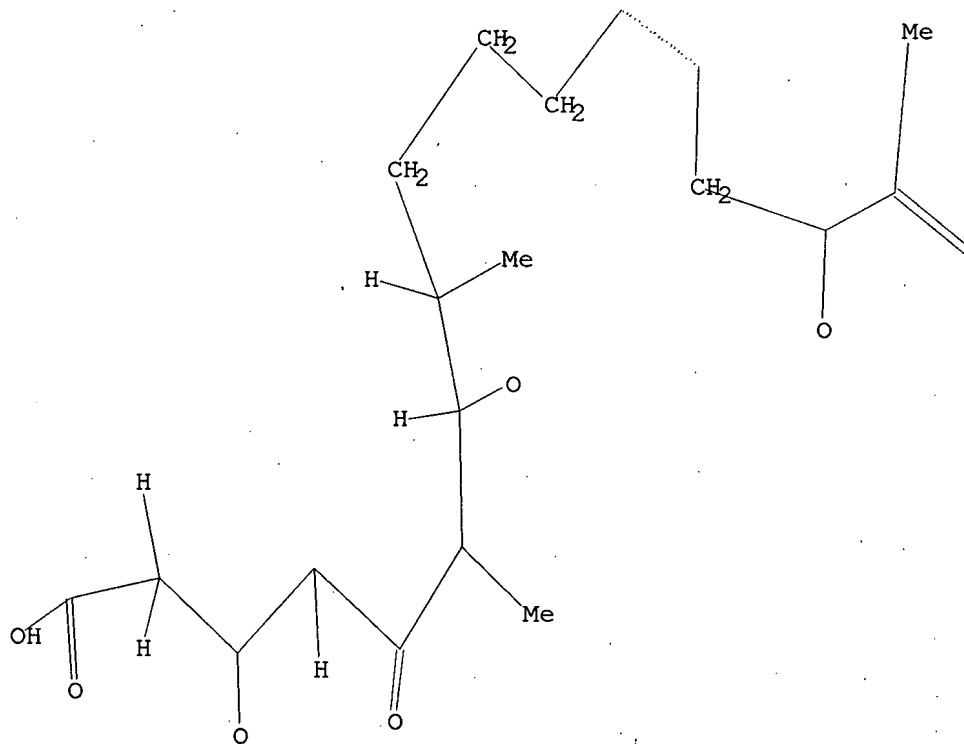
2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS 10:CLASS  
 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS  
 19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS 26:CLASS  
 27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS 33:Atom

L2 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



G1 H,C

Structure attributes must be viewed using STN Express query preparation.

=> s l1 full

FULL SEARCH INITIATED 10:28:31 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 912 TO ITERATE

100.0% PROCESSED 912 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

L3

0 SEA SSS FUL L1

=> d 12

L2 HAS NO ANSWERS

L2 STR

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

Structure attributes must be viewed using STN Express query preparation.

=> s 12 full

FULL SEARCH INITIATED 10:28:47 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 169 TO ITERATE

100.0% PROCESSED 169 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

L4 0 SEA SSS FUL L2

=> log y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

344.20

344.41

STN INTERNATIONAL LOGOFF AT 10:28:51 ON 13 AUG 2007

Connecting via Winsock to STN

cl 14

Welcome to STN International! Enter x:x

LOGINID:SSPTANXR1625

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

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NEWS 2 MAY 01 New CAS web site launched  
NEWS 3 MAY 08 CA/CAPLUS Indian patent publication number format defined  
NEWS 4 MAY 14 RDISCLOSURE on STN Easy enhanced with new search and display fields  
NEWS 5 MAY 21 BIOSIS reloaded and enhanced with archival data  
NEWS 6 MAY 21 TOXCENTER enhanced with BIOSIS reload  
NEWS 7 MAY 21 CA/CAPLUS enhanced with additional kind codes for German patents  
NEWS 8 MAY 22 CA/CAPLUS enhanced with IPC reclassification in Japanese patents  
NEWS 9 JUN 27 CA/CAPLUS enhanced with pre-1967 CAS Registry Numbers  
NEWS 10 JUN 29 STN Viewer now available  
NEWS 11 JUN 29 STN Express, Version 8.2, now available  
NEWS 12 JUL 02 LEMBASE coverage updated  
NEWS 13 JUL 02 LMEMLINE coverage updated  
NEWS 14 JUL 02 SCISEARCH enhanced with complete author names  
NEWS 15 JUL 02 CHEMCATS accession numbers revised  
NEWS 16 JUL 02 CA/CAPLUS enhanced with utility model patents from China  
NEWS 17 JUL 16 CAPLUS enhanced with French and German abstracts  
NEWS 18 JUL 18 CA/CAPLUS patent coverage enhanced  
NEWS 19 JUL 26 USPATFULL/USPAT2 enhanced with IPC reclassification  
NEWS 20 JUL 30 USGENE now available on STN  
NEWS 21 AUG 06 CAS REGISTRY enhanced with new experimental property tags  
NEWS 22 AUG 06 BEILSTEIN updated with new compounds  
NEWS 23 AUG 06 FSTA enhanced with new thesaurus edition  
NEWS 24 AUG 13 CA/CAPLUS enhanced with additional kind codes for granted patents

NEWS EXPRESS 29 JUNE 2007: CURRENT WINDOWS VERSION IS V8.2,  
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 05 JULY 2007.

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\* \* \* \* \* STN Columbus \* \* \* \* \*



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=> FILE REG

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 10:30:04 ON 13 AUG 2007

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STRUCTURE FILE UPDATES: 12 AUG 2007 HIGHEST RN 944447-30-7

DICTIONARY FILE UPDATES: 12 AUG 2007 HIGHEST RN 944447-30-7

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

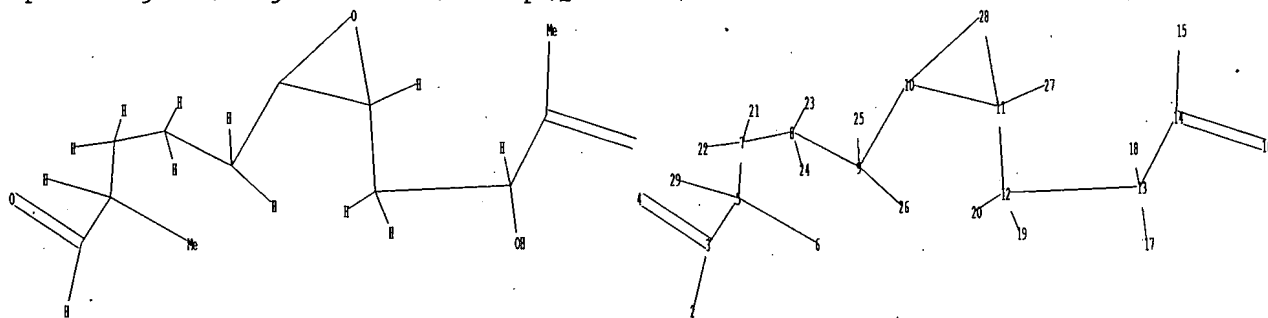
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

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chain nodes :

2 3 4 5 6 7 8 9 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26  
27 29

ring nodes :

10 11 28

chain bonds :

2-3 3-4 3-5 5-6 5-7 5-29 7-8 7-21 7-22 8-9 8-23 8-24 9-10 9-25 9-26  
11-12 11-27 12-13 12-19 12-20 13-14 13-17 13-18 14-15 14-16

ring bonds :

10-11 10-28 11-28

exact/norm bonds :

3-4 10-11 10-28 11-28 13-17

exact bonds :

2-3 3-5 5-6 5-7 5-29 7-8 7-21 7-22 8-9 8-23 8-24 9-10 9-25 9-26 11-12  
11-27 12-13 12-19 12-20 13-14 13-18 14-15 14-16

G1:H,C

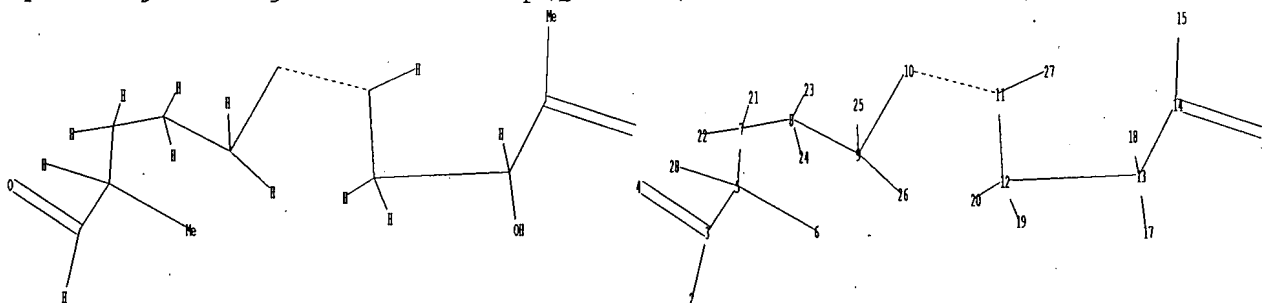
Match level :

2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS 10:Atom  
11:Atom 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS  
19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS 26:CLASS  
27:CLASS 28:Atom 29:CLASS

L1 STRUCTURE UPLOADED

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Uploading C:\Program Files\Stnexp\Queries\10538200f.str



chain nodes :

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24  
25 26 27 28

chain bonds :

2-3 3-4 3-5 5-6 5-7 5-28 7-8 7-21 7-22 8-9 8-23 8-24 9-10 9-25 9-26  
10-11 11-12 11-27 12-13 12-19 12-20 13-14 13-17 13-18 14-15 14-16

exact/norm bonds :

3-4 10-11 13-17

exact bonds :

2-3 3-5 5-6 5-7 5-28 7-8 7-21 7-22 8-9 8-23 8-24 9-10 9-25 9-26 11-12  
11-27 12-13 12-19 12-20 13-14 13-18 14-15 14-16

G1:H,C

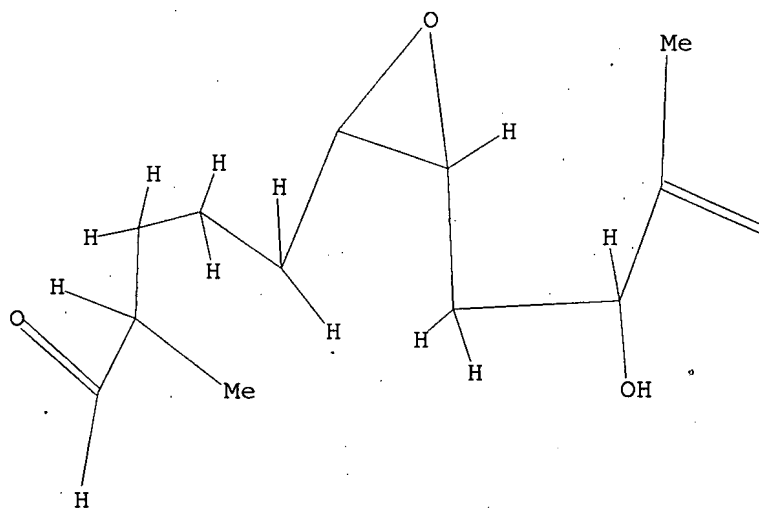
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L2 STRUCTURE UPLOADED

=> D L1

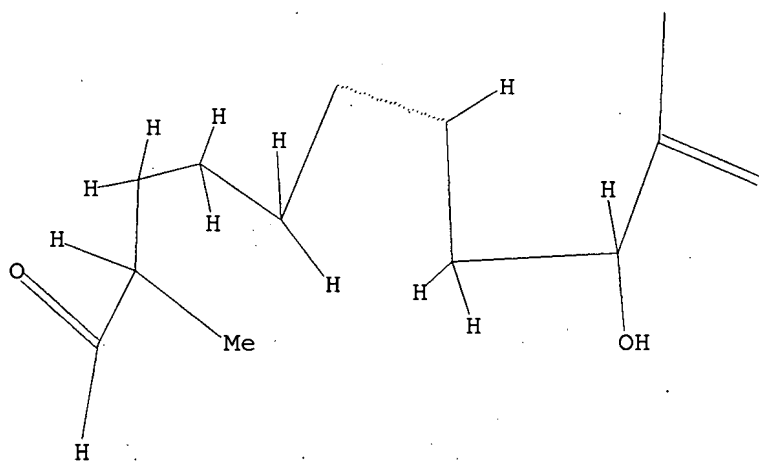
L1 HAS NO ANSWERS  
L1 STR



G1 H,C

Structure attributes must be viewed using STN Express query preparation.

=> D L2  
L2 HAS NO ANSWERS  
L2 STR



G1 H,C

Structure attributes must be viewed using STN Express query preparation.

=> s l1 full  
FULL SEARCH INITIATED 10:31:16 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 1531 TO ITERATE

100.0% PROCESSED 1531 ITERATIONS  
SEARCH TIME: 00.00.01

2 ANSWERS

L3 2 SEA SSS FUL L1

=> s 12 full  
FULL SEARCH INITIATED 10:31:20 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 69139 TO ITERATE

100.0% PROCESSED 69139 ITERATIONS 0 ANSWERS  
SEARCH TIME: 00.00.01

L4 0 SEA SSS FUL L2

=> file caplus  
COST IN U.S. DOLLARS SINCE FILE TOTAL  
ENTRY SESSION  
FULL ESTIMATED COST 344.20 344.41

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FILE LAST UPDATED: 12 Aug 2007 (20070812/ED)

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=> s 13 full  
L5 1 L3

=> d ibib abs hitstr tot

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2004:550960 CAPLUS  
DOCUMENT NUMBER: 141:106321  
TITLE: Preparation of epothilone derivatives for use in pharmaceutical compositions as antitumor agents  
INVENTOR(S): Denni-Dischert, Donatienne; Floersheimer, Andreas; Kuesters, Ernst; Oberer, Lukas; Sedelmeier, Gottfried  
PATENT ASSIGNEE(S): Novartis A.-G., Switz.; Novartis Pharma G.m.b.H.  
SOURCE: PCT Int. Appl., 50 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
| WO 2004056832 | A2   | 20040708 | WO 2003-EP14747 | 20031222 |
| WO 2004056832 | A3   | 20040910 |                 |          |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LT, LU, LV, MA, MD, MK, MN, MX, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SE, SG, SK, SY, TJ, TM, TN, TR, TT, UA, US, UZ, VC, VN, YU, ZA, ZW

RW: AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR

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| AU 2003294938   | A1 | 20040714 | AU 2003-294938    | 20031222   |
| EP 1581536  | A2 | 20051005 | EP 2003-785920    | 20031222   |
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| CN 1732172  | A  | 20060208 | CN 2003-80107416  | 20031222   |
| JP 2006514025   | T  | 20060427 | JP 2004-561416    | 20031222   |
| US 2006014796   | A1 | 20060119 | US 2005-538200    | 20050609   |
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|   |    |          | WO 2003-EP14747   | W 20031222 |
| OTHER SOURCE(S):  |    |          | MARPAT 141:106321 |            |
| GI  |    |          |                   |            |

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

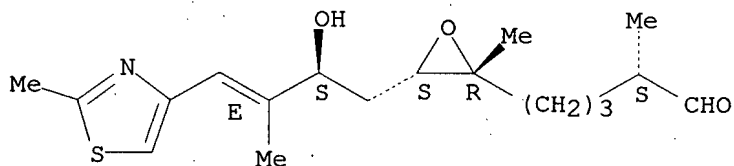
AB C4-demethyl-epothilones or C4-bisnor-epothilones, such as I [R1, R7 = H, alkyl; R2 = nitrogen containing heteroaryl; R3 = H, Me; X = O, NR7; Z = O, bond], were prepared via fermentation and organic synthesis for use in pharmaceutical compns. as antitumor agents. Thus, C4-bisnor-epothilone B II (R3 = H) was prepared via an aldol condensation of aldehyde III with in situ disilylated (3R)-3-hydroxy-5-oxoheptanoic acid followed by a desilylation/macrolactonization reaction sequence. Also, C4-demethyl-epothilone B II (R = Me) was prepared directly by a fermentation process. The prepared epothilones were assayed for efficacy against human KB-31 and KB-8511 carcinoma cells. Drug delivery formulations containing the prepared epothilones were presented.

IT 717917-44-7P  
RL: BPN (Biosynthetic preparation); RCT (Reactant); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of epothilone derivs. via fermentation and organic synthesis for use in pharmaceutical compns. as antitumor agents)

RN 717917-44-7 CAPLUS

CN Oxiranepentanal, 3-[(2S,3E)-2-hydroxy-3-methyl-4-(2-methyl-4-thiazolyl)-3-butenyl]- $\alpha$ ,2-dimethyl-, ( $\alpha$ S,2R,3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.



IT 717917-46-9P  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU.

(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
(Uses)

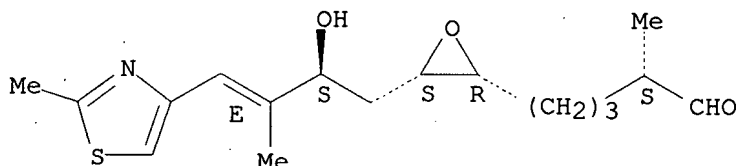
(preparation of epothilone derivs. via fermentation and organic synthesis  
for use in  
pharmaceutical comps. as antitumor agents)

RN 717917-46-9 CAPLUS

CN Oxiranepentanal, 3-[(2S,3E)-2-hydroxy-3-methyl-4-(2-methyl-4-thiazolyl)-3-  
butenyl]- $\alpha$ -methyl-, ( $\alpha$ S,2R,3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as shown.



=> d his

(FILE 'HOME' ENTERED AT 10:29:42 ON 13 AUG 2007)

FILE 'REGISTRY' ENTERED AT 10:30:04 ON 13 AUG 2007

L1 STRUCTURE UPLOADED

L2 STRUCTURE UPLOADED

L3 2 S L1 FULL

L4 0 S L2 FULL

FILE 'CAPLUS' ENTERED AT 10:31:25 ON 13 AUG 2007

L5 1 S L3 FULL

=> log y

COST IN U.S. DOLLARS

| SINCE FILE | TOTAL   |
|------------|---------|
| ENTRY      | SESSION |
| 5.74       | 350.15  |

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

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| ENTRY      | SESSION |
| -0.78      | -0.78   |

CA SUBSCRIBER PRICE

STN INTERNATIONAL LOGOFF AT 10:31:44 ON 13 AUG 2007